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Aims and Scope
Library and Information Management Forum - ISSN 1117-7918 is a publication of Ahmadu Bello University Library Complex. It is published two times a year – January and July.

The journal is a peer reviewed publication which aims at publishing articles of interest and value to information management and academics within Library and Information profession. It also publishes articles designed to assist in the teaching of information and library management as academic disciplines. Field experiences and reports are as well encouraged. The journal is designed for academic scholars and information managers as well as those out there seeking updates on current experiences and future prospects on contemporary information and communication environment.

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EDITORIAL NOTE

This edition of the Library and Information Management Forum features sixteen (16) high quality and peer reviewed articles with contemporary articles in line with global trends as well as specialized content areas in the field of Library and Information Science. Statistically, 2(13%) of the article focuses on Artificial Intelligence, 4(26%) of the papers focused on Information and Communication Technology, 1(7%) focused on Open Educational Resources, 4(26%) of the papers focused on Libraries and Librarians, 1(7%) of the articles focused on Record retention, 1(7%) of the papers focused on Metadata, 1(7%) focused on Drug abuse, while 1(7%) of the papers focused on Climate Change Misinformation.

The lead paper by Whong, investigated the Challenges and Opportunities of Implementing Artificial Intelligence and Machine Learning in Nigerian Libraries. Urhiewhu and Idiodi also Investigated Information and Communication Technologies Utilization for Resource Management in Academic and Special Libraries.

Similarly, Iheagwam and Edom discussed the Utilization of Artificial Intelligence in Academic Libraries in Nigeria, its Benefits and Challenges.

On the other hand, Bakrin, examined the Role of Library Personnel in the Creation, Advocacy and Discoverability of Open Educational Resources in Nigerian Universities. Likewise, Hashim, Maji, Ayodele, and Isah, investigated the Use of Web-based Information Services for Academic Activities by Undergraduate Students of Department of Mass Communication, Ahmadu Bello University, Zaria.

Yakubu and Olaogun, investigated Empowering Information Service Delivery: The Roles of Women Librarians in Promoting Academic Library Development in Taraba State, Nigeria. While Gambo, explored Influence of the Use of Records Retention Schedule in Shari'a Courts for Dispensation of Justice in Kaduna State. Ozor, Gbishe, and Suleiman, focused on Determining Who is a Librarian: Skills, Competencies for the 21st Century Librarian.

Yusuf, focused on the Utilization of Metadata Standard for Description and Facilitation of Access to Legal Information Resources in the Networked Digital Environment. Similarly, Idiodi, Izevbigie and Omoregie, examined Library Innovation, Financial Accountability in Library, and academic performance of Tertiary Institutions in Nigeria.

Mohammed, Gambo and Unobe discussed Strategies for Enhancing Visibility and Accessibility of Scholarly Contents in Academic Digital Repositories. Also, Jimoh, Ibikunle and Garba focused on Information on Drug Abuse among Science Education Students of Ahmadu Bello University Zaria: The Role of librarians. While, Mohammed, Umar and Maifata, investigated the Preservation and Utilization of Digital Information Resources in Selected Federal University Libraries in the North West, Nigeria. Nzewi & Agboola investigated the Relationship between Work Condition and Institutions Commitment by Librarians in Academic Libraries

All the articles contained in this edition were peer reviewed by experts in various content areas of Library and Information profession before the acceptance for inclusion.

Sincere gratitude goes to the editorial team of this journal and the reviewers who ensured that this edition sees the light of the day. I therefore, recommend this edition to all stakeholders in the profession to purchase and utilize.

Dr. Amina Oiza Jimoh
Editor-in-Chief

CHALLENGES AND OPPORTUNITIES OF IMPLEMENTING ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN NIGERIAN LIBRARIES: AN OVERVIEW OF SELECTED CASE STUDIES

WHONG, F. M.
Kashim Ibrahim Library, Ahmadu Bello University, Zaria
fideliawhong@gmail.com +2348035927624

Abstract

Integrating artificial intelligence (AI) and machine learning (ML) technologies into services delivery in Nigerian libraries offers revolutionary possibilities as well as serious challenges. This paper examines six case studies and the challenges involved in integrating AI and ML into the Nigerian library system, highlighting the urgent need for technology development in this field. The paper found the following challenges exist: insufficient financial resources, a shortage of qualified workers, issues with data availability and quality, challenges related to legislation and regulation, and cultural and societal barriers, and knowledge and the skill set required for integrating AI and ML personnel shortage. Notwithstanding these challenges, AI and ML present several chances to improve library services by means of enhanced information retrieval, automated routine chores, optimum resource management, greater accessibility, and the promotion of research and innovation. Therefore, this paper attempts to direct the successful implementation of AI and ML in Nigerian libraries, making sure they stay relevant and able to satisfy the changing demands of their users in the digital era, by looking at successful case studies and offering strategic recommendations for successful implementation.

Keywords: Machine learning, Artificial intelligence, Nigerian libraries, Challenges, Opportunities

Introduction

Artificial intelligence (AI) and Machine learning (ML) are today essential technologies with a wide range of uses in the healthcare, education, and library institutions. The integration of AI and ML in Nigerian libraries offers an important avenue for investigating both the challenges and opportunities it faces.

A definition of the extent of AI and ML technologies is necessary before one can appreciate the need for adopting these technologies in Nigerian libraries.

AI encompasses computer systems that can perform tasks such as pattern recognition, natural language understanding, and problem-solving, which typically require human intelligence (Katiyar et al., 2024). Conversely, ML refers to algorithms that allow computers to learn from data and increase their performance without the need for explicit programming (Pratyasha et al., 2022).

Knowing these definitions prepares one to investigate how these technologies could completely transform Nigerian library services.
Nigeria, a nation rich in cultural heritage but increasingly in need of technological development, has libraries that serve as essential information and knowledge stores for its people.

These libraries' inability to stay current with technological advances, however, frequently makes it more challenging for them to offer patrons effective and current services (Enakrire, 2023). By modernizing with AI and ML, Nigerian libraries could overcome these challenges and improve their services to meet the changing demands of their users.

One cannot overstate the importance of technologically upgrading Nigerian libraries. Libraries must change to be effective in serving their communities in a time when knowledge is becoming more and more digitalized and easily available.

AI and ML can help Nigerian libraries optimize resource management, simplify operations, and enhance user experiences (Tolulope, 2024).

This modernization is not only a luxury but also a necessity to guarantee that libraries remain important hubs of knowledge sharing and learning in the digital age.

As a result, this paper aims to investigate the complexities of implementing AI and ML in Nigerian libraries, as well as to clarify the possible advantages and challenges associated with this technical development through the lens of six selected case studies.

Case Studies

In order to perform an exhaustive analysis of both Nigerian pilot projects and successful implementations in other countries, it is imperative to conduct a thorough examination of the use of AI and ML in Nigerian libraries.

By leveraging global best practices and insights from the following six selected cases studies, one can establish a beneficial framework for customizing these technologies to suit the Nigerian situation.

Bichu et al. (2021) conducted the initial case study on the application of Artificial Neural Networks (ANNs) and Convolutional Neural Networks (CNNs) in the field of orthodontics. This study included a cohort of 1,000 orthodontic patients from various dental clinics. By utilizing ANNs and CNNs, the study made significant improvements in diagnostic accuracy and treatment planning. These tools enabled the meticulous examination of dental pictures and patient data, resulting in enhanced precision and customized treatment regimens.

Implementing these advancements in library services requires customizing algorithms to effectively process the varied and intricate data sets that are unique to library operations.

The primary challenge involves creating AI models capable of efficiently processing and analyzing the diverse range of data present in libraries, including text, photos, and multimedia.

Also, Yang et al. (2022) investigate the incorporation of AI with Google Earth Engine (GEE) in a variety of applications, with a particular emphasis on geographic analysis and remote sensing.

The methodology entailed a comparative analysis of remote sensing data processed with AI and GEE at 100 geographic sites worldwide.

The research illustrated substantial enhancements in the visualization, data analysis, and decision-making processes associated with environmental monitoring and resource management by employing AI algorithms to analyze extensive satellite imagery.

The integration of AI and GEE has demonstrated substantial potential for libraries, particularly in the areas of data analysis and visualization. Nevertheless, the necessity of addressing data privacy concerns, extensive staff training, and substantial infrastructure investment are among the obstacles.

Another study conducted by Bi et al. (2022) examines the integration of AI with Internet of Things (IoT) technologies in smart libraries. The focus of this investigation was to use AI to improve library services, with a sample size of 30 smart libraries from various countries.

By utilizing AI algorithms and IoT devices, smart libraries can optimize resource utilization, automate commonplace duties, and provide library users with personalized experiences. For example, Chabots powered by AI can offer immediate assistance to consumers, while IoT sensors can monitor environmental conditions to guarantee the preservation of library materials.

Nevertheless, the implementation of smart technologies in libraries requires a substantial financial investment and the capacity to surmount resistance to change among patrons and library staff. Successful integration of these technologies is contingent upon ongoing stakeholder engagement and the implementation of effective change management strategies.

Reis (2024) also explore the Nigerian financial sector's cybersecurity measures, emphasizing the necessity of technological advancements to defend against cyber threats.

The implementation of AI and ML technologies to detect and mitigate cyber threats was the primary focus of this study, which also included a survey of cybersecurity protocols across 50 Nigerian banks.

By continually monitoring network traffic and identifying potential threats in real time, AI and ML can enhance cybersecurity protocols, safeguard sensitive data, and guarantee the reliability of digital resources, according to the results.

Libraries face similar cybersecurity challenges that necessitate continuous updates and significant investments in AI-driven security systems to protect digital resources and user data from intrusions.

Furthermore, a study conducted by Bali (2024) investigates the effects of AI advancements on learning outcomes in the Nigerian education sector. The study examined the incorporation of AI in 25 educational institutions, including secondary schools and universities, with a sample size of 5,000 students and educators.

AI technologies are progressively improving the quality of learning, research, and knowledge sharing by automating administrative tasks, facilitating access to educational resources, and providing personalized learning experiences.

In order to guarantee the effective use of these technologies, libraries must collaborate with educational institutions and provide continuous user training. The challenge is to adapt AI-driven educational tools to support diverse academic requirements.

Finally, Mwangi (2024) conducted a case study that examined the use of AI applications to optimize supply chain processes in Kenya. This study investigated the use of AI and ML to improve operational efficiency, resource allocation, and inventory control in 200 supply chain operations from a variety of industries.

The results indicate that AI and ML can significantly improve supply chain management by predicting demand, optimizing routes, and reducing operational costs.

Some of the logistical challenges that come with putting similar solutions into libraries include adding AI to existing library management systems and making sure that all of the library's different functions work together without any problems.

A comprehensive approach to AI adoption, which includes staff training and system enhancements, is necessary to address these challenges.

Ultimately, by drawing insights from these six case studies, Nigerian libraries can gain a

thorough understanding of the potential advantages and challenges associated with the implementation of AI and ML technologies. In order to strategically plan and execute AI and ML initiatives, Nigerian libraries will be able to draw lessons from successful global implementations and pertinent local examples.

Hence, these technologies provide opportunities to promote the dissemination of knowledge and empower users in the digital age by optimizing resource management, fostering innovation within the library ecosystem, and enhancing service delivery.

Challenges of Implementing AI and ML in Nigerian Libraries

The effective integration and application of ML and AI in Nigerian libraries necessitates addressing several challenges. These challenges can be grouped into the following subsections.

Technological Infrastructure: Limited access to sophisticated computing resources is one of the main challenges Nigerian libraries face in using AI and ML technology. Without sufficient infrastructure in place, such as high-performance computer systems, libraries could find it difficult to use and apply AI and ML tools (Enakrire, 2023).

An inadequate internet connection exacerbates this issue, as the successful implementation of AI and ML applications in libraries relies on seamless data processing and online resource access, he further noted that some Nigerian libraries lack the necessary hardware and software to support AI and ML technologies.

This includes inadequate internet connectivity, outdated computers, and insufficient digital resources (Mahmud, 2024).

Financial Constraints: Implementing AI and ML technologies requires significant investment, which is often beyond the budgetary allocations of many Nigerian libraries. Tolulope (2024) added that funding is a major obstacle to the use of AI and ML in Nigerian libraries.

Many libraries, particularly those with tight budgets, may find the high expenses of obtaining and sustaining AI and ML technology to be unaffordable.

The general low funding available for libraries in Nigeria makes it more difficult for institutions to invest in the resources required to assist AI and ML projects (Blow, 2024).

Skilled Personnel: The dearth of qualified AI and ML experts in the Nigerian library sector is another major issue. A shortage of qualified staff members hinders the effective application and use of AI and ML technologies in library settings (Amzat, 2023).

Therefore, continuing education and professional development programmes are necessary to bridge this gap, equipping library employees with the necessary knowledge and skills to utilise AI and ML effectively (Barsha & Munshi, 2023).

Data Quality and Availability: Data quality and availability are major obstacles impeding the use of AI and ML in Nigerian libraries (Chika, 2024).

Notably, because so many library items are still in old formats, inadequate digitalization of library resources makes it challenging to use AI and ML technologies to their full potential (Ailakhu, 2024).

Also, because libraries lack defined procedures and infrastructure to manage massive amounts of data, maintaining and managing huge datasets can be challenging (Chika, 2024).

Policy and Regulatory Issues: Policy and regulatory concerns are also major obstacles to incorporating AI and ML into Nigerian libraries (Bali, 2024). The lack of encouraging government policies designed especially to direct the integration of these technologies impedes development in this field (Bi, et al, 2022).

Furthermore, libraries face major obstacles because they must follow strict rules to protect user data and provide moral data handling procedures (Olujobi et al., 2021).

Cultural and Social Barriers: Further complicating the use of AI and ML in Nigerian libraries are cultural and societal obstacles (Baro & Nwabueze-Echedom, 2022).

One typical problem is that people are reluctant to adopt new technology or procedures that go against established library procedures, both for staff members and customers (Iltis, 2023).

Applications based on AI and ML raise ethical questions, particularly with regard to maintaining moral principles and protecting user privacy (Oladeinde, 2024).

Opportunities for Implementing AI and ML in Nigerian Libraries

Artificial intelligence and machine learning provide Nigerian libraries with many new opportunities to improve user experiences and transform traditional library services.

AI-driven systems can greatly improve search skills in databases, archives, and library catalogues, providing an important prospect for improved information retrieval (Enakrire, 2023).

Libraries can provide customised user experiences by using ML algorithms to tailor search results and suggestions to specific preferences and actions (Tolulope, 2024). This enhances user satisfaction and encourages greater engagement with library resources.

Automating repetitive operations through AI and ML integration is another important prospect for Nigerian libraries. Libraries can improve productivity and reduce manual labour by streamlining cataloguing and categorization procedures using AI technologies (Mahmud, 2024).

AI chatbots and automated reference services can improve user interactions by answering questions quickly and allowing employees to concentrate on more difficult jobs (Enakrire, 2023). This automation saves time and ensures constant service delivery.

Among the many ways AI and ML may help Nigerian libraries is in resource management. Libraries can use predictive analytics to build collections by anticipating user demands and information consumption patterns (Tolulope, 2021).

ML models enable libraries to make well-informed decisions about resource purchases and distribution, maximising their holdings to efficiently satisfy user needs. AI can also help with the effective administration of digital resources by guaranteeing simple access to and retrieval of electronic materials (Enakrire, 2023).

For libraries, diversity and accessibility are critical factors, and AI provides the means to successfully address these concerns. AI technologies can help people with disabilities by offering text-to-speech, adaptive interfaces, and other accessible features (Enakrire, 2021).

Furthermore, AI can be critical in closing the digital gap by providing creative ways to increase the accessibility of library materials to marginalised groups (Tolulope, 2024). Using AI technologies, Nigerian libraries can ensure that

their offerings are inclusive and meet a variety of user demands.

Research and innovation are two areas where AI and ML can have a significant impact on Nigerian libraries. These technologies' data analytics can assist scholars in conducting sophisticated studies and gaining insightful knowledge from vast volumes of data (Tolulope, 2024).

The library use of ML algorithms can improve knowledge discovery, facilitate data-driven decision-making, and promote creativity in scholarly and scientific activities. Moreover, AI has the potential to foster research cooperation and knowledge exchange, advancing an open access and multidisciplinary cooperation culture (Enakrire, 2023).

AI-powered solutions can improve an important component of community involvement in Nigerian libraries. Libraries can use AI technologies to increase the reach of their outreach initiatives and interact more successfully with the community (Tolulope, 2024).

Personalized learning experiences, resource recommendations, and lifelong learning possibilities are just a few ways that AI-powered solutions might help educational endeavours (Enakrire, 2023). By means of community involvement programmes powered by AI, Nigerian libraries can enhance their function as centres of information sharing and cultural enrichment.

Integrating AI and ML into Nigerian libraries presents numerous opportunities across various aspects of library operations. The possibilities for AI technologies to revolutionize Nigerian libraries range from automating regular chores and boosting information retrieval to encouraging accessibility and resource management.

By seizing these opportunities, Nigerian libraries can improve their services, better serve their communities, and maintain their leadership in digital age innovation.

Recommendations for Successful Implementation

When introducing AI and ML into Nigerian libraries, it is critical to take into account a number of suggestions for a successful rollout. Making these suggestions will help to guarantee that the integration of these technologies is efficient, long-lasting, and advantageous to the library environment.

It is clear from a variety of academic works that important foundations for successful implementation are strategic planning and investment, capacity building and training, policy and advocacy, and community involvement (Huang, 2022; Harisanty et al., 2022; Subaveerapandiyan, 2023; Hussain, 2023; Mahmud, 2024).

Successful application of AI and ML in libraries is mostly dependent on strategic planning and funding. A thorough implementation strategy must outline the goals, objectives, and road map for integrating these technologies into library services (Hussain, 2023).

Libraries could find it difficult to fully use AI without a defined plan. Finding enough money and resources is also critical (Hussain, 2023; Subaveerapandiyan, 2023). Libraries need to make the investments in the equipment, technology, and infrastructure required to efficiently support AI applications. Insufficient infrastructure can make AI in library services more difficult to use successfully (Hussain, 2023).

Training and capacity development turn out to be essential elements of successful AI and ML integration in libraries. Building training

programmes for library employees is crucial to giving them the abilities and information they need to use AI technologies (Harisanty et al., 2022; Mahmud, 2024). Collaborations with academic institutions can help improve capacity-building initiatives by providing access to specialised training materials and knowledge (Harisanty et al., 2022). Libraries may guarantee that their employees are skilled at using AI tools to improve library services by making investments in ongoing education and skill development.

An enabling environment for the use of AI in libraries depends critically on policy and lobbying. It is crucial to advocate for favourable government policies to secure legislative and political support for AI projects in libraries (Huang, 2022).

Creating rules for the use of ethical AI is just as crucial to guaranteeing that AI applications in libraries follow data privacy laws and ethical principles (Huang, 2022). Libraries can negotiate the possible legal and ethical obstacles to AI implementation by promoting supportive laws and creating ethical standards.

Community involvement is another important suggestion for the effective use of AI and ML in libraries. Participating in the implementation process with library users promotes inclusivity and ownership (Subaveerapandiyan, 2023; Jha, 2023).

Libraries can tailor AI solutions to the specific needs and tastes of their communities by including users in decision-making processes and asking for their input. Additionally, increasing knowledge of the benefits of ML and AI is critical (Subaveerapandiyan, 2023; Mahmud, 2024).

Understanding the potential benefits of AI technology among library users can help build acceptance and trust for these developments.

In the end, a calculated approach including strategic planning, capacity building, policy advocacy, and community involvement is required for the effective application of AI and ML in Nigerian libraries. By implementing these suggestions, libraries can leverage the transforming potential of AI to improve user experiences and services while keeping up with digital-age technology developments.

Conclusion

The application of AI and ML in Nigerian libraries presents a complex landscape with numerous opportunities and significant challenges.

The major obstacles include insufficient financial resources, a shortage of qualified workers, issues with data availability and quality, challenges related to legislation and regulation, and cultural and societal barriers.

These challenges emphasize the need for all-encompassing plans to overcome constraints and create an environment that promotes technical progress.

On the other hand, the prospects are significant and include better resource management, automated routine activities, better information retrieval, more accessibility and inclusivity, encouragement of research and innovation, and more community involvement.

These advantages show how AI and ML may completely change library services and improve user experiences.

By drawing insights from the six selected case studies reviewed earlier, AI and ML provide Nigerian libraries with enormous and revolutionary potential advantages. Libraries can use these technologies to improve resource management, offer customized and inclusive

services to their customers, and greatly increase their operational efficiency.

Because AI and ML can automate repetitive operations, improve information retrieval, and support cutting-edge research projects, they are essential tools for updating library services and guaranteeing their continued relevance in the digital era. Stakeholders, including government agencies, educational institutions, and librarians, must aggressively support the implementation process in order to reap these rewards.

This assistance ought to cover capacity building, infrastructure investment, strategic planning, and the creation of ethical standards and supporting laws.

Therefore, conquering the challenges and realizing the full potential of AI and ML in Nigerian libraries will require a coordinated effort from all stakeholders.

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INFORMATION AND COMMUNICATION TECHNOLOGIES UTILIZATION FOR RESOURCE MANAGEMENT IN ACADEMIC AND SPECIAL LIBRARIES: A COMPARATIVE STUDY

Lucky Oghenetega Urhiewhu[1] &PhD[2]Evelyn Omoluabi Idiodi, PhD[2]

University Library, Dennis Osadebay University Asaba, [1]
Delta State, Nigeria
Lucky.urhiewhu@dou.edu.ng

Department of Educational Management, [2]
(Library and Information Science)
University of Benin
Benin City, Edo State
Email: taiyeidiodi@uniben.edu.ng

Abstract

This study looked into how digital technologies, such as computers, the internet, and mobile devices, are used to manage library resources in academic and special libraries. With a target population of 27,730, the study surveyed 845 librarians, staff members, and users using a descriptive research approach and questionnaires. Notwithstanding the widespread belief that special libraries have more ICT resources than academic libraries, the findings demonstrated that ICTs are underutilized in resource management. The study really discovered that compared to special libraries, academic libraries in South-South, Nigeria have greater ICT resources. ICT adoption in resource management requires more than just having them available; a dependable power source and a motivated workforce are also essential for successful ICT implementation.

Keywords: ICTS, Resource Management, Academic, Special Libraries and Comparative Study

Introduction

Information and communication technology, or ICT, is the umbrella term for a wide range of devices and services that make it easier to create, gather, process, transmit, and store information.

Examples of these tools and resources include computers, the Internet, broadcasting technologies, and telephones (UNESCO, 2020). Improving information availability and streamlining communication between humans, machines, and other machines are the main objectives of information and communication technology (ICT).

ICT has facilitated the creation, access, sharing, and consumption of information for individuals with the introduction of smartphones and broadband internet.

The ICT landscape is expected to undergo significant transformation in the future thanks to innovations like Web3 and quantum computing, as well as generative AI systems like ChatGPT and 6G networks (Rouse, 2023).

ICT is not just a technology in the context of libraries; it is also a tool for achieving those goals through ICT use in libraries.

History and Evolution of ICT

Information and Communication Technology (ICT) has its origins in the 19th century, when the telephone and telegraph made it possible to communicate in real time across great distances, revolutionizing social interactions and the workplace.

Mass communication was first made possible by the development of radio and television in the middle of the 20th century.

By the end of the century, the internet had spread throughout society as a means of entertainment, business, and communication. Since then, its explosive expansion has persisted in transforming the way people engage and work online (Rouse, 2023).

Year	Technological Advancement
1837	The telegraph and Morse code transform long-distance communication
1876	Real-time voice discussions are made possible by the introduction of the telephone.
1895	Wireless telegraphy pioneers the use of radio waves for communication
1927	The first television broadcasts bring visual entertainment to the masses
1947	The invention of the transistor opens the door to contemporary electronics
1951	The first commercial computer, UNIVAC I, is released
1969	ARPANET establishes the basis for the contemporary internet
1971	Digital communication begins with the sending of the first email
1990	The launch of the World Wide Web facilitates simple access to and sharing of information on the internet.
1991	The Global System for Mobile Communication (GSM) establishes the benchmark for mobile networks.
1991	The Global System for Mobile Communication (GSM) establishes the benchmark for mobile networks.
1994	The web browser Netscape Navigator gains widespread use
1998	This period saw the founding of Google, which revolutionized online information access and search
2001	Faster mobile internet becomes widely available thanks to commercial 3G networks
2004	Facebook debuts in this year and quickly gains popularity as a major social media network
2007	Mobile computing and smartphones are revolutionized by the iPhone.
2008	Blockchain-based cryptocurrency is first introduced by Bitcoin
2010	Even faster mobile internet speeds are available with 4G networks
2016	This period saw the AI system AlphaGo overcome a world-champion go player, signaling a major advancement in artificial intelligence.
2020	5G networks will provide mobile internet

connectivity that is considerably quicker and more dependable

2023 Zoom highlights the move to remote work and virtual communication by reaching 350 million attendees at daily meetings

2024 The use of artificial intelligence (AI) tools spreads, changing entire sectors of the economy and drastically altering how we work and live.

Special libraries in librarianship help parent organizations by supplying information to support their operations, such as a government agency, hospital, or industrial enterprise (Ashworth, 1979:9).

The Federal Ministry of Justice in Lagos and the Higher Court of Justice, both founded in 1990, are two instances of special libraries in Nigeria (Nnaji, 1986). Over 32 special libraries were located in Nigeria in 1979, according to Okiy (1998:93), a number that has subsequently greatly risen.

Conversely, tertiary institutions such as universities, colleges of education, and polytechnics have academic libraries. This study's concentration is on university libraries.

Resource management and resource development are two different but related ideas. Resource management includes organising, storing, and making the resource accessible, while resource development deals with choosing and acquiring materials to suit users' present and future needs (Singh, 2004:17).

According to Branin (1994:25), librarians' responsibilities are now more closely aligned with resource management than resource development, with an increased focus on information interpretation and user accessibility.

In Nigeria, the application of Information and Communication Technologies (ICTs) in libraries has been a topic of discussion since the 1970s, but actual implementation has been limited (Daniel et al., 2003:83).

The Nigerian Library Association has recognized the importance of ICTs in libraries, commissioning a survey on their use in 2002.

The advent of the internet has increased global communication and access to information, but the impact of ICTs on library operations like resource management depends on their effective use. For example, online networks could be used to expedite book selection and processing, but if ICTs are not properly utilized, their benefits will be minimal (Anao, 2003).

To be relevant in the ever evolving world of today, both individuals and organizations need to be able to adapt and pick up new skills. This is especially true for those working in libraries and information centres, who help teachers convey the skills necessary to stay up to date with the rest of the world (Anao, 2003).

Emmanuel and Alfred's (2008) study on ICT management for education in Tanzania highlights the substantial hurdles associated with implementing ICT services in African libraries.

Information and communication technology (ICT) integration in libraries is beset by a number of issues, such as ICT acquisition, digital resource preservation, maintenance and security issues, user training, and a general lack of commitment and understanding among library stakeholders.

According to a 2009 study by Walmiki and Ramakrishnegowda on the ICT infrastructure in academic libraries in Karnataka, the majority of libraries did not make full use of their campus LANs to capitalize on the advantages of digital information and lacked proper hardware, software, and internet access.

Given these results, the researchers hope to learn more about how ICTs affect resource management in Nigerian academic and special libraries. Some have even suggested that special libraries may do better in this area than public ones.

Statement of the Problem

Information and Communication Technologies (ICTs) are available to academic and special libraries in the South-South area of Nigeria.

These technologies are anticipated to improve library services. Users, however, complain about the services they get and point to a lack of sufficient information provided.

The use of ICTs can help to improve inefficient resource management, which may be the cause of this discontent. This study looks into how ICTs are used and available in various libraries, as well as how they affect resource management.

Hypotheses

In the investigation, the following null hypotheses were examined.

1. ICT for resource administration is equally available in South-South Nigerian academic and special libraries.
2. Academic and special libraries in the area have the same resource management facilities.
3. Academic and special libraries in the area use ICTs for resource management in a comparable manner.
4. The region's academic and special libraries receive comparable financing for ICTs used in resource management.
5. Academic and special libraries in the area face the same resource management issues as a result of ICTs.

Methodology

This study uses questionnaire as its main instrument and an ex-post-facto descriptive research design. Three separate sections comprise the questionnaire: one for users, one for library workers, and one for library administrators.

The questionnaire was subjected to expert review and pretesting to guarantee its validity and reliability; the outcome was a reliability coefficient of 0.71. Out of the 27,730 participants in the target demographic, 845 individuals were chosen at random.

Chi-square analysis was used to examine the study hypotheses, with a significance level of 0.05.

Results

Hypothesis 1:

ICT for resource administration is equally available in South-South Nigerian academic and special libraries.

Table 1: The availability and use of Information and Communication Technologies (ICTs) in managing resources across academic libraries and special libraries will be compared statistically using the chi-square test (X2).

Variables	Agreed	Disagreed	Total	Df	X2- Cal	X2- Crit	Level of sig	Decision
University libraries	125	357	482					
Special libraries	49	219	268	1	5.512	3.84	0.05	Significant
Total	174	576	750					

The results show that there is a statistically significant difference (5.512 > 3.84) at the 0.05 level of significance between the computed X2 value of 5.512 and the crucial X2 value of 3.84.

As a result, the null hypothesis is rejected, indicating that academic and special libraries differ significantly in terms of the availability and application of ICTs for resource management.

Hypothesis 2

Academic and special libraries in the area have the same resource management facilities.

Table 2: The facilities used for resource management in university libraries and special libraries were compared statistically using the chi-square test (X2).

Variables	Not/A	A/Not Funct	A/funct	Readily A/funct	Total	Df	X2- Cal	X2- Crit	Level of sig	Decision
University libraries	152	113	136	81	482					
Special libraries	110	74	35	49	268	3	22.92	7.82	0.05	Significant
Total	262	187	171	130	750					

Not/2

Hypothesis 3

Academic and special libraries in the area use ICTs for resource management in a comparable manner.

Table 3: Applying the Chi-Square statistical test to examine how Information and Communication Technologies (ICTs) affect resource management procedures at academic institutions and special libraries.

Variables	Agreed	Disagreed	Total	Df	X2- Cal	X2- Crit	Level of sig	Decision
University libraries	343	139	482					
Special libraries	46	222	268	1	20.12	3.84	0.05	Significant
Total	389	361	750					

The null hypothesis is rejected because the computed X2 value of 201.2 is more than the crucial X2 value of 3.84, showing a statistically significant difference ($p < 0.05$) in the use of ICTs on resource management between academic and special libraries.

Hypothesis 4

The region's academic and special libraries receive comparable financing for ICTs used in resource management

Table 4: Using a statistical test known as chi-square, this study examines the funding differences between special libraries and universities for resource management technology.

Variables	Agreed	Disagreed	Total	Df	X2-Cal	X2- Crit	Level of sig	Decision
University libraries	33	48	81					
Special libraries	12	2	14	1	8.38	3.84	0.05	Significant
Total	45	50	95					

Attained X2 = 8.38, critical X2 = 3.84, df = significance level = 0.05 Significant decision; null hypothesis rejected. Table 4 shows that there is a substantial gap between the computed X2 value of 8.38 and the critical X2 value of 3.84. As a result, the null hypothesis is disproved, indicating that academic and special libraries support ICTs for resource management in very different ways.

Hypothesis 5

Academic and special libraries in the area face the same resource management issues as a result of ICTs.

Table 5 compares the limits of information and communication technologies (ICTs) in managing resources between university libraries and special libraries through statistical analysis using the Chi-square test (X2).

Variables	Agreed	Disagreed	Total	Df	X2-Cal	X2- Crit	Level of sig	Decision
University libraries	59	22	81					
Special libraries	13	1	14	1	1.96	3.84	0.05	Significant
Total	72	23	95					

X2 = 1.96, df = 1, significance level = 0.05, critical X2 = 3.84 were obtained. Conclusion: Acceptance of the null hypothesis, not significant.

Table 5 shows that, at the 0.05 level of significance and 1 degree of freedom, the computed X2 value of 1.96 is less than the critical X2 value of 3.84, suggesting that there is no statistically significant difference in the ICT constraints for resource management between academic and special libraries.

Findings

The study's main conclusions are as follows:

1. In the South-South region of Nigeria, academic and special libraries have considerably different access to information and communication technologies (ICTs) for resource management.

2. The facilities used by special and academic libraries in the area for resource management vary greatly.

3. There are notable differences in how academic and special libraries in the area use ICTs for resource management.

4. Funding for ICTs used for resource management varies significantly between academic and special libraries.

5. In the region, academic and special libraries encounter comparable challenges when utilizing ICTs for resource administration, notwithstanding variations in other domains.

Conclusion

Information services, operations, and distribution have expanded and changed as a result of the integration of computer technology and information communication technology (ICT) into library operations. The world is going through a huge information revolution, and libraries need to change with the times to be relevant in the global information economy.

Information is a useful tool that is essential to planning and decision-making. Making better use of data from different economic sectors helps improve decision-making and user information distribution.

The study does, however, show that there is a limited availability and use of ICTs for resource management. In contrast to special

libraries, academic libraries in South-South Nigeria have more ICT resources.

Furthermore, the study demonstrates that having ICT resources alone does not guarantee their utilization for resource management and that a sufficient supply of electricity and having an inspired workforce is crucial.

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UTILIZATION OF ARTIFICIAL INTELLIGENCE IN ACADEMIC LIBRARIES IN NIGERIA: BENEFITS AND CHALLENGES.

Sarah Nkechi Iheagwam Ph.D, CLN[1] & Prof. Basil O. Edom CLN[2]

College Library, Federal College of Education (Technical) Ekiadolor, [1]
Benin, Edo state.
sarahwhite4jesuschrist@gmail.com

Department of Library and Information Science[2]
Imo State University Owerri
onyeoziriedom@gmail.com

Abstract

Modern technology has proved itself a major force in virtually every sector in contemporary life. This is on the assumption that almost every human activity is basically scientific, technical or technological in form. The fizzing space of changes in society and in all aspects of education as key to human development has heightened the need for more innovations and creativity in education, not least in Academic Libraries as the hub of academic service delivery. One emerging technology in response to this need that is gaining traction across the globe is Artificial Intelligence (AI), a multi-task computer system set to redefine the way libraries and other sectors function. This paper titled Utilization of Artificial Intelligence (AI) in Academic Libraries in Nigeria: Benefits and Challenges is a qualitative assessment of the use of the latest technology in Academic Libraries in Nigeria and issues around it. The paper seeks to plough related literature to arrive at the conceptual meaning and interpretation of this 21st century breakthrough and possible benefits and pit-falls in the context of Academic Libraries, it's socio-ecological variants that surround it's utilization in Nigeria was also explored. Conclusion was drawn on the basis of which way suggestions were made.

Keywords: Academic Libraries, Artificial Intelligence (AI), Computer, Library automation, Technology.

Introduction

Technology has far-reaching implications for virtually every aspect of life today, including education where it has had unqualified impact. Academic Libraries, like all other Libraries are integral part of this continuum, more so as the heart of any academic institution.

Being part of the institutional quality, the push for investment and innovations in new technologies, training and/ or retraining is becoming the trend, especially in advanced climes where strict observance of quality education is a norm. One major technical breakthrough in relatively recent time that is gaining traction is Artificial Intelligence, a multi-task computer system conceived in the mid-20th century by the British logician and computer pioneer, Alan Mathewson Turing.

This technology was developed for practical use across fields - medicine/health, business, defenses/security, oil exploration, computer control, education and many others such as expert system, natural language processing, speech recognition, machine vision, etc.

The utilization of AI in librarianship in particular is becoming a turning point in the development of library services in this age. In fact

and for many, it is a significant development that is revolutionizing library operation and services (Tella, 2020; Adebayo, Bello, kayode &Yusuf, 2022).

Studies have shown that AI is a vibrant technology whose application has over time proven to offer a viable alternative to human exertion in library service delivery. It has also been argued that AI can complement librarian's expertise rather than replace it.

This is not to gloss over several other benefits that accompany the technology. On the other hand, it has been contended that the application of this technology may have a backlash as it may lead to loss of jobs by librarians (International Labour Organization, 2018; Frey & Osborn as cited in Cox, 2022; Enakrire, n-d), thereby increasing the unemployment rate, especially in Nigeria where the incidence of unemployment is already alarming.

Whatever is the case, AI is the technology of the future, although Academic Libraries in Nigeria have not appreciably adopted the technology due to a good number of reasons. This paper explored these reasons and other critical issues that surround the utilization and application of the technology and the need for it's utilization in Academic Libraries in Nigeria, as a defining 21st century technological breakthrough.

Concept of Artificial Intelligence (AI)

Artificial intelligence is a complex, dynamic phenomenon. The technology conjures up different meanings depending on what it is used for.

This peculiarly makes the concept difficult to be defined with precision, coupled with it's somewhat evolutionary nature, which as literature showed had a long history before it was formally investigated as a scientific discipline, if you will, a field of study in computer science that develops and studies machines.

It is thus, sometimes referred to as the intelligence of machine or software as opposed to the Intelligence of living beings. Yet to some, AI is a science of making machines that can think like humans. Such machines may be called or referred to as AI.

AI could as well be said to mean the ability of a machine to display human- like capabilities such as reasoning, learning, planning and creativity. AI could also be defined as a branch of science that stimulates intelligent behavior into computers to serve complex problems better than humans.

Frankenfield (2021) defines AI as the simulations of human intelligence in computers that are trained to think and act like humans. Artificial Intelligence as described by Merriam-Webster (2019) is a branch of computer science that works with providing machines the ability to appear to natural human intelligence.

Artificial Intelligence is a replica knowledge obtained through the use of computer peripherals and programmed to become actual and valuable to mankind due to its technical application and usage (Emezaiwakpor, Idiodi & Urhiewhu, 2023)

There are indeed a litany of these definitions in the literature and possibly as many as those who attempt to define AI. However, one definition that seems to be more outstanding with promise and benefits of comprehensiveness, currency and future changes is that offered by AI.

High-level Expert Group (2019) which describes AI as system that display intelligent behaviour by analyzing the environment taking action with some degree of autonomy to achieve specific goals.

This definition encompasses all applications we currently qualify as AI and at the same time provide scope for future changes to that qualification.

Alongside advanced machines, learning and deep learning technologies, this definition also allows for other technologies including the more traditional approaches (Sheikh & Schrijvers, 2023)

AI is a multi-task invention, vast and complex in application and whose adoption in Academic Libraries, especially in developed economies is setting a new level of efficiency and effectiveness. Its ultimate goal is to create computer systems that rival human Intelligence (Asemi & Asemi,2018).

This description clearly has a major implication for libraries. As Sivrajah, Kamal, Irani and Weerakkody, (2017) pointedly note, the rise of AI in Academic Libraries allows for better analysis data sets, especially large data sets used for analysis across multiple data. It also gets rid of repetitive and boring task.

It is not really out of place to say that the application of AI to library operations helps Libraries develop capabilities that can exceed human mind. This is not peculiar to libraries but to so many other fields.

So, Stern's as cited in Chemulwo and Siroorei (2010) stated that AI is the science and engineering of making intelligent smart machines and devices that are able to learn new concepts and tasks, and draw useful conclusions about the world around, understand a natural language, comprehend a visual scene and perform from other types of feats that ordinarily require human types of intelligence.

For Omame and Alex- Nmecha (2020) application of AI has become pervasive, involving expert systems for reference services, book reading and self-reading robots virtual reality for massive learning, among others.

AI makes use of concepts from various other fields including cybernetic, information theory, psychology, linguistics, logic and computer aided instructions, as well as assist machines to find solutions to complex problems in a more human-like fashion which generally involve borrowing and characteristics from human intelligence and applying them as algorithm in software programmes (Monicah & Siroorei, 2020).

On the contrary others have taken the view that the adoption and application of AI can lead to job loss in Academic Libraries. The International Labour Organization (2018) for instance has noted that with the current trend of technological change based on the adoption of AI in various organizations, including libraries, the adoption of AI has created wide spread fears of job loss and a significant rise in inequality.

In their seminar analysis, Frey and Osborn as cited in Cox (2022) stress the disappearance of more routine roles through automation. They listed library assistants clerical as 95% amenable to automation and library technicians and 99% at risk. However, the role of librarian is judged only 65% likely to be automated.

In general, it is equally easy to imagine human work being diminished or enhanced by AI. Sharing same view, Omame and Alex-Nmecha (2020) noted that the incorporation of AI in Libraries can be perceived to alienate librarians from their users.

This scenario could leave many workers as mere servants of the machine. As some have observed, this fear may contribute to none adoption or low patronage of AI in Academic Libraries in most developing countries including Nigeria.

More importantly however, studies have shown that AI can complement librarians expertise rather than replace it (Enakrire, n-d).

Automation in Academic Libraries in Nigeria

It cannot be overstressed that Academic Libraries are the central focus of their parent institutions, hence often referred to as the heart of any academic institution.

Kwampong as cited in Adubika (2007) has perhaps couched this more clearly when he remarked that the health, intellectual vitality and the effectiveness of any educational institutions depends, in the main, on the state of health and excellence of its library, which is its very lifeblood.

As the author further noted, an inert and dilapidated library will ultimately translate into an inert and dilapidated institution. These remarks are as relevant today as they were more than five decades ago when they were made.

As is already noted elsewhere, libraries, especially in developing countries may become dilapidated in the 21st Century unless they begin to harness new smart and intelligent technologies for improved operations and service delivery.

To avert this danger, Academic Libraries must be prepared to adopt, adapt and apply the wide range of innovations, skills and competence and expertise now needed for the efficient provision of information and its effective management.

This is more urgent in this information society. This is what Kumar (2008) probably meant when he writes that providing proactive library services requires careful examinations of current capabilities, users' needs and the direction for the future.

This indeed underscores the timeless saying that a library is only as good as it's resources. This explains why libraries across the world are exploring ceaselessly innovative ways to improve their services and operations.

Yet studies overtime have shown that a good number of Academic Libraries in Nigeria seem to be unable to meet their targets in most things.

Cataloguing these gaps Abayomi, Oluwafemi and Hassan (2021) noted that these libraries are not adequately funded, hence characterized by poor infrastructure, inadequate staffing, lack of facilities, among others, the effect of which translates to poor commitments towards information service delivery. Corroborating this claim, Yakubu and Sule as cited in Soyele,

Oyebola and Ajegbomogun (2021) observed that Academic Libraries find it very difficult to maintain their core collection and library activities because of finances or money and high inflation of ITC equipment that can make library activities efficient and effective. The situation becomes worse with emergence of hi-digital automation which requires huge capital outlay.

Academic library automation includes the use of computer to carry out routine or traditional housekeeping tasks including reference, acquisition, circulation, cataloguing, stock verification and several controls.

It could as well be referred to as the conversion of Academic Library procedures from manual to computerized, such as from a card catalogue to an OPAC or from manual circulation cards to an integrated library system (Librarianship Studies and Information Technology, 2020).

Incidentally, with the introduction of AI in library Automation has undergone a resolution which has taken a diverse approach to converting static libraries into technologically advance information center. Today AI algorithms automate the process of cataloguing and classifying library materials based on metadata extraction from text and so on.

In spite of these soaring advantages and potential impact of AI in transforming Academic Library services, Academic Libraries in Nigeria

still find it difficult to invest meaningfully in this state- of - the –art technology.

This does not only account for low level of awareness of these automations and their uses among library professionals but also their low patronage in Academic Libraries in Nigeria.

Perhaps the most unexpected outcome of this is that only a few universities in Nigeria as is the case in many other developing economies have introduced AI in their libraries.

Although, appreciable number of universities in Nigeria now offers degrees in AI, perhaps as a policy response preparatory to the application and use of the technology, but enough ground has not been prepared as so much uncertainty seem to becloud its application in the country.

Potential Benefits of Artificial Intelligence

As earlier implicated, obsolescence and inadequacies of traditional library service in information society, such as ours, has underscored the importance, if not the inevitability of modern technologies today.

It should be obvious by now that there is no aspect of the library that is not affected by computer technology-information acquisition, storage, handling and dissemination, not least routine activities such as collection development, circulation and reference services, serial management and technical services, name it, have been improved tremendously with the use of technology.

Ankrah and Atuase (2018) have indeed made a point when they noted that the era of ICTs which is the advent of internet where academic library services has been transformed to electronic services which include social mediation application, digital cu-ration, mobile technologies, preservation and online scholarly communication has in one way or the other enhanced the mission of Academic libraries in this dispensation.

AI is no exception. Apart from improving all science and human interactions the technology is reconfiguring many library tasks such as classification, indexing, cataloguing, information retrieval, reference, information literacy and even learning. It has indeed been acclaimed to be the greatest usable intelligence that has the capacity of assisting librarians in decision making and administration.

As earlier noted, Artificial Intelligence is a multi-task technology with promise of incredible benefits which include:

i. **Automation of Library Operations:** Artificial Intelligence can easily automate such traditional library tasks as cataloguing, circulation, acquisition, reference, stock verification, free up librarians time to focus on more complex tasks, etc.

ii. **Allows for Better Data Analysis:** Artificial Intelligence allows for better analysis of big data sets, especially data sets used for analysis across multiple data sets (Sivarajah, Kamal,Irani & Weerakkbody, 2017).

iii. **Reduces Human Error in Library Operations:** Library operations with Artificial Intelligence is less prone to errors and defects than when carried out by humans.

iv. **Saves Labour, Increases Production and Efficiency:** Artificial Intelligence has the capacity to operate at scales and faster in processing library items than any human being. It can work continuously as much as seven days without experiencing fatigue.

v. **It Enables Data-Driven Decision Making:** Artificial Intelligence powers data analytic tool, enables libraries extract valuable insights from their collections, usage data and user interaction.

vi. **Enhances Library Users' Experience:** Artificial Intelligence technologies offer opportunities to enhance efficiency, personalizes user experience and revolutionizes knowledge dissemination in libraries.

vii. **Improves Information Retrieval:** AI helps to search information easily, retrieve information across different combination and assist with users' questions.

viii. **It Provides Visual Assistance and Chatbots:** The virtual assistants can provide instant assistance to users, answer their questions and direct them to relevant resources. Chatbots can help to reduce the workload of library staff and improve their experience (Kaushal & Yadav, 2022).

ix. **Enhances Information Organization:** By leveraging AI tools and technologies, libraries can enhance information organization, streamline operations and provide personalized services to their users.

x. Assists machines to find solutions to complex problems in a more human-like fashion which generally involves characteristics from human intelligence and applying them as algorism in software programmes (Chemulwo & chapkiru, 2020).

xi. **Provides Collaborative Research Platforms:** AI can easily connect users with similar research interest and facilitate knowledge sharing and collaboration. These platforms promote interdisciplinary collaboration and foster innovation, research and scholarship (Xu, Yang & Liu, 2021).

With these highlights one can see that the benefits of AI are incredibly infinite. AI ensures that libraries continue to play a vital role, not only in transforming library services but also in supporting academic research, teaching and learning in this digital age.

Challenges of the Application of Artificial Intelligence in Academic Libraries in Nigeria

Artificial Intelligence evidently has become one of the defining characteristics in Academic Libraries, especially as researchers are increasingly relying on a wide range of information resources that can be critical to support teaching, research and learning.

Beneath the benefits of AI, there lurks myriad of challenges in its usage in Academic Libraries especially in developing countries where the technology is yet to find sound footing.

In fact Tella (2020) has noted that libraries in the developed countries have accepted and use AI technologies virtually in all spheres of life whereas those in developing countries are still struggling to find their feet.

Academic libraries in Nigeria are no exception to these challenges. These challenges may include but are not limited to:

1. **Culture of Resistance to Change.** There has been this stereotype that Africans have a tendency to resist change, the fear of trying new things and indeed averse to accept new values created by the impact of innovations. This attitude constitutes a drag on progress and can easily hinder the adoption and use of AI in

academic libraries as well as other sectors in Nigeria.

2. **Fear of loss of jobs.** Closely tied to the above is deep seated fear that the introduction of AI in Academic libraries may lead to loss of jobs by librarians and allied workers, especially when human labour is displaced enmasse, which ordinarily will increase the already swollen unemployment rate in the country.

3. **Underfunding.** Utilization of AI and its maintenance, like every other hi-tech is capital intensive. Incidentally poor funding of tertiary education in Nigeria has been consistently low. The effect this trend has already had on the development of academic libraries and education in general in Nigeria has been catastrophic. If this status quo does not change it may lead to a little or no acquisition of AI in academic libraries in Nigeria, and of course, it is one thing to acquire the technology and quite another to put them into use by experts, maintain them and all that. All this has cost implications which government or parent institutions must be prepared to bear.

4. **Power Outage.** AI is power -driven and continued erratic power supply in the country and/or in universities and other institutions of higher learning as is often the case today may pose a hindrance to the operations of the technology.

5. **Dearth of Manpower.** AI is a complex and sophisticated technology that require specialized knowledge to manage. Besides, it is novel, especially to developing countries like ours where such critical skills and knowledge to operate and maintain the technology is in short supply, especially in the short run, whether indigenous or imported. This technological backwardness can constitute a problem in the management of AI in the libraries.

6. **Organizational Restructuring.** The introduction of any hi-tech such as AI usually leads to structural re-organization and system change, including work relations which may create some ecological uncertainties in any organization. With the adoption of such automations as AI this situation is bound to arise and may require new commitment and understanding to adjust. This does not come cheap. New orientation of staff, training and retraining, and user education and learning support are required with far-reaching implications in terms cost and logistics. Consider that every change comes with its intended and unintended consequences.

7. **Lack of Human Touch.** Many have argued that with the advent of automation we have become over dependent on smart devices and this reliance is having a negative impact on our cognitive abilities. This becomes worse with the introduction of AI. No matter the luxury of smart devices or any other automation, its efficiency and effectiveness, the machine cannot be a substitute for human touch, warmth and cordiality. Humans being what they are will always prefer to interact with fellow humans directly to whom they

express their feelings rather than with a machine.

8. **Fear of Over Dependence.** Excessive dependence on machines or automations can easily lead to loss of skill and ability to initiate solutions to problems. If massively dependent on, AI can hamper our skills sharpening abilities, impair our ability to think about anything else or perform task.

Way forward

In view of the issues raised above the following suggestions are made:

1. There is urgent need for formulation of AI policy by the government and allied bodies to address broader and structural concerns about the adoption and use of AI in Academic Libraries in Nigeria.

2. Efforts should be made by parent institutions and other relevant authorities to address the problem of energy system to power the high performance computers required for AI.

3. Efforts should be made by Academic Libraries to provide programmes to re-skill or up-skill existing workforce as anti-dote to the potential threat of job loss that may arise from AI automation.

4. There is need for creation of awareness and staff orientation and/or re-orientation against stereotypes that may affect the adoption and use of AI in Academic Libraries in Nigeria.

5. Considering that the adoption and use of AI requires huge capital outlay both the government and parent institutions of Academic Libraries should see the issue of funding as a priority.

Conclusion

Libraries by nature are ever evolving as organic entities, and since the *raison d'etre* of any university or college is the education of its students, no programme, however well intended can succeed without the active participation of the library, a role that makes the academic library the fulcrum around which every academic activity revolves.

This role has become more critical with the new knowledge economy. If the Academic libraries in Nigeria are to thrive they must open for innovations and changes in their services and adapt to the changing demands of the time.

One emerging technology that will have an increasingly revolutionary impact, and indeed offer incredible promise in this direction today is AI. The technology has already set to change the complexion of Academic Libraries across the globe.

So, if Academic Libraries in Nigeria must come to terms with the rapid changes and expectations for the library of the future they must avail themselves of the soaring benefits of this 21st century breakthrough.

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THE ROLE OF LIBRARY PERSONNEL IN THE CREATION, ADVOCACY AND DISCOVERABILITY OF OPEN EDUCATIONAL RESOURCES IN NIGERIAN UNIVERSITIES

Sirajudeen Femi Bakrin
University Library,
Fountain University, Osogbo, Nigeria.
sf.bakrin@gmail.com

Abstract

This study examines the management of open educational resources (OER) among personnel working in university libraries in Osun State. it looks at the involvement of the staff in the creation, advocacy, and discoverability of OER in the institutions. The sampling technique included one hundred and sixty-three (163) library personnel 91 librarians and 72 library officers serving in the institutions. A descriptive survey design was adopted using a structured questionnaire via Google Forms through the Osun State chapter of the Nigeria Library Association, and personal e-mail addresses. Only one hundred and sixteen (116) respondents filled out and submitted the questionnaire. The data generated from this process was analyzed subsequently using descriptive statistics. The findings indicate that the personnel are involved in advocacy projects, creation, and discoverability of OER in the university libraries. However, there is room for improvement to deepen this crucial involvement.

Keywords: Open Educational Resources, OER creation, OER advocacy, OER discoverability

Introduction

Academic libraries are natural partners in Open Educational Resources (OERs) which have become popular means of conveying pedagogical information materials to the generality of tertiary institutions, especially the economically disadvantaged students.

Ever since it's open endorsement by UNESCO, institutions of higher learning have adopted it as an alternative to the traditional textbooks priced out of the rich of many students (Bliss & Smith, 2017).

The proliferation of OERs is not limited to the academic communities in the global North. The global south has also keyed into the concept and propagated its adoption by the faculty to enhance the spread of its usage.

The ease of accessibility to information resources that OERs embody is an essence of librarianship enshrined in the Ranganathan laws of library science. So, besides economic consideration, information services are better delivered through OERs when the intervention of library personnel is encouraged and adequately utilized.

In the global north, the synergy between the librarians and the faculty has moved beyond the concept of subject or liaison librarian to a more enduring phenomenon known as embedded librarianship.

Collection development is vital to the survival of the library system. Dill and Cullen (2020) observed that the involvement of library personnel in the selection of appropriate, quality, and valuable OERs beyond what is produced by the faculty is paramount to the sustainability of OERs as an educational material.

The expertise of the library profession is brought to bear on the selection process in this era of information overload. Similarly, the library personnel are relevant in the process of creating OERs by the faculty. Experiences have shown that while the faculty writes books for publications, the statistics of usage by the library patrons are adequately captured by the librarians.

Therefore, to advise appropriately on those subject areas and texts where OERs should be considered by the faculty, consultation with the library is essential (Coyne, 2021).

Moreover, librarians also assist in metadata creation for the available OER (Temesio, 2020). Even after publishing the OER materials, the intended users may still not use them adequately.

Thus, advocacy and publicity aimed at creating awareness for OER is undertaken by the library as a dependable partner in the information service business (McLure & Sinkinson, 2020).

It is on this premise that academic libraries organize symposia, seminars, open access week, etc. to enlighten the reading public about the importance of OER and similar resources to educational advancement.

Thus tripod of librarian involvement vis-à-vis, content creation, selection and acquisition, and advocacy projects makes it indispensable in the course of managing OERs in the university community.

The relevance of the OERs to economic amelioration and its impact on information service delivery has been unquestionable globally. This is a phenomenon that has been acknowledged within Nigerian academia even though the level of involvement of libraries in content creation has been restricted.

The current study will further populate the literature on open educational resources by Nigerian authors with specific bias to the management of OER materials. It will further expand the sphere of specific roles of the university libraries in content creation, advocacy, and strategies to ensure the findability of OERs.

The shortfall in subject coverage by existing OER materials noted by Bakrin and Liasu (2024) can easily be taken care of with the direct involvement of the libraries and thus further integrate OERs into library services.

Statement of Problem

Several authors have discussed OER in the Nigerian space with great emphasis on the relationship between the library and the new initiative.

Some scholars have addressed promotional issues (Ogunbodede & Cocodia, 2023; Ogunbodede et al, 2021; Wiche & Ogunbodede, 2021), infrastructure (Idowu et al, 2023), and challenges impeding the adoption of OER in the academic communities in Nigeria.

Only a few publications have addressed the case of the role of the library and librarians in the management (Ailakhu & Ibrahim, 2024) of OER in Nigerian universities.

Then, it has only scratched the surface without addressing the core areas of deeper involvement of librarians in content creation, selection and acquisition, and advocacy projects.

This dearth of abundant literature on the participation of Nigerian libraries and librarians in the creation and collection development of OER has created a gap that ought to be filled for the nation to catch up with the rest of the world.

Also, the few Nigerian literature on the role of librarians in content creation acknowledged that the involvement of librarians is not widespread (Zaid, 2019). This acknowledgment calls for concern given the economic reality among the teeming Nigerian students.

Meanwhile, the professional expertise of the librarians and libraries which has positioned them sufficiently for such assignments will become redundant. Therefore, this study intends to fill this vacuum and awaken both the libraries and the academia to this important but often neglected consideration of the libraries as indispensable partners in OER management.

Research Questions

This study generally examines the role of libraries and librarians in the management of open educational resources in the university libraries located in Osun State. Specifically, however, the following details are questions that the study uncovers:

1. What is the involvement of university libraries and librarians in the creation of content in the open educational resources in Osun State?

2. What are the advocacy activities conducted by the university libraries and librarians in Osun State to promote the use of open educational resources within academia?

3. What has been the role of the university libraries and librarians in ensuring the findability of open educational resources by the users?

Literature Review

Open Educational Resources (OER) Africa was established in 2008 to consolidate the OER movement in Africa (OER Africa, 2021). Jobe et al (2018) have identified three important elements in OER management namely creation, curation, and discovery of OER content.

Librarians have the professional training to drive the creation, adaptation, and curation of OER (Katz, 2018). Even though OER is not new to Nigerian library personnel, there have been no widespread specific roles and responsibilities for librarians in OER initiatives (Zaid, 2019).

There is a need for more inclusivity if we envisage an OER initiative that is acceptable to all the stakeholders including library personnel (Mishra, 2017) more so when the library has assisted greatly in providing infrastructure for the storage, creation, and dissemination of OER (Cummings-Sauls, et al, 2018). Librarians could work directly with the faculty to identify valuable information resources that could contribute immensely to the academic progression of the students and collaborate to produce OER on such textbooks (Avila & Wray, 2018).

The importance of OERs to knowledge advancement institutions has been attested to by several authors.

Donaldson (2016) observed that the higher cost of subject textbooks in tertiary institutions is affecting student customer behavior making it difficult for students to stork their libraries and for the book vendors to maximize profit via patronage by the students. Jung (2017) noted that financial savings are therefore made by students through the adoption of OER.

This observation is in tandem with the position of Temesio (2020) who acknowledged that OER is a cost-saving initiative that guarantees inclusive education to the socioeconomically marginalized group.

Besides the reduction in the financial obligations of students on book procurement, Cheung et al (2023) noted that students generally perceived OER to be more beneficial during the COVID-19 crisis, especially about open online courses and open-access textbooks.

He noted further that students in physical class mode perceived OER to be more useful for tests and examinations while students in distance learning modules relate its usefulness more to being supplements to course materials.

Both are however concerned about the accuracy and comprehensiveness of the OER. In their study, Jung et al (2017) discovered that it is perceived by the faculty that OER books are of equal or greater quality than traditional textbooks.

Some faculty believe students perform better when they use traditional textbooks.

Orzech and Abramovich (2020) noted that it is undeniable that librarians are not the traditional owners of open educational resources.

The creators of the OERs are the faculty who originate these pedagogical resources to ensure alternative texts for the use of the students of tertiary institutions. However, the job of its creation and subsequent activities that can influence its accessibility and use cannot be exclusively appropriated by the faculty.

Thus, the librarians as agents of information resource dissemination are appropriately positioned to fill the gaps that are required in OER creation. Access to a variety of information resources, understanding of the peculiar features of qualitative library materials, and other technicalities that surround the book production chain make the involvement of librarians in OER creation unavoidable.

This can be comprehended in some collaborative projects and teamwork aimed at integrating OER into the SDGs of the United Nations. Such projects include the iEnergy Open Library; a component of 2020 OE4BW projects (SDG7 Hub).

This was the submission of Drevensek and Urbancic (2022). Therefore, librarians are important partners and collaborators in the creation of OERs (Runyon & Steffy, 2021; Smith, Workman, Hartsell & Hill, 2023)

Through OER, the librarian plays the role of a mediator between the instructor and the student facilitating access to the resources via repositories (Jalil, 2022). OER can easily be integrated into the repository leading to an economy of cost and ease of operability.

Al Abri and Dabbagh (2018) discovered that the findability of appropriate OER by students remains an obstacle as well as the near absence of regulation and control which makes it an all-comers' job. This discovery essentially gives credence to the popular saying that accessibility to information resources is as important as its availability.

Ali (2018) noted that a Ranganathan law of library science has advocated accessibility to library resources as the core and essence of user services in the library. It is this accessibility that provides insight to authors' insights and guarantees users' satisfaction.

Despite the acknowledged advantages of OER, literature has identified locating, finding, and retrieving these resources as a constant challenge to the users (Vladoiu, 2013).

Apart from sustainability and remixing, discoverability has emerged as a significant obstacle in the way of OER in academic institutions (Luo et al, 2019). Dichev et al (2011) noted that the availability of open content is not enough to guarantee accessibility.

The non-discoverability of these materials has ensured low patronage by users even when the resources are available for use. The proliferation of OER is acknowledged globally.

Therefore, rather than creating new platforms for OER, the focus in this contemporary age should be geared towards ensuring the discoverability of the existing ones and linking them together to enhance their visibility to a wider audience (Otto & Kerres, 2022).

Roncovic (2021) suggested that one of the major roles of the librarian is to help with the discoverability of OER via directories such as

dedicated repositories and portals. It should be noted that the faculty is not highly skilled at finding OER materials.

The majority of the academic staff require assistance on how to locate open educational resources (Fischer, 2020). Librarians possess the skills to assist students and faculty in finding quality OER materials (Davis, 2016).

The libraries could aggregate OERs across all departments of the university and make them freely available through the repositories of the university (Mitchell, 2014) and assist the users in identifying the materials (Upneja, 2020).

Perifanou and Economides (2022) observed that missing metadata descriptions and the absence of uniform OER metadata descriptions are the major obstacles to adequate discoverability of OER by the users.

Therefore, compliance with metadata standards and metadata consistency are crucial to the description and management of digital resources in a bid to ensure their discovery (Tmava & Alemneh, 2013).

This metadata creation is a professional calling of the library personnel (Temesio, 2020). When metadata are not properly made to align with user requirements, it consequently leads to inaccessibility (Beyene & Godwin, 2018).

Librarians are significant to resource discovery (of texts needed to prepare OERs), information literacy, and cataloguing of information resources (Braddlee & VanScoy, 2019).

Leng (2016) observed that Japanese open source software, WEKO was used to develop two web portal repositories on OER materials. Apart from making the content freely available, it spotlights the librarian as manager of institutional assets.

In the same vein, the library of the Ukrainian State University of Science and Technology has played a formidable role in the facilitation of online text and non-text OER for the use of staff and students on distance learning programmes (Kolesnykova 2022).

To cater to the information needs and usability of special people, Navarrete and Lujan-Mora (2015) noted that standard practices that are designed to make usability easy for special library users, accessibility to the web, and presence of appropriate information architecture are the three vital areas that must be considered in a bid to include people with special needs in OER findability.

Even though OER has become widely recognized as a substitute for traditional educational resources, its awareness and adoption among the faculty after decades of its existence is still low.

They need to be aware of what their institutions possess as well as those floating in cyberspace (Otto & Kerres, 2022). It has been proven that OER can improve the retention memory of its users and influence learning outcomes.

It was discovered that the hesitation of the faculty to buy into the total adoption of OER stems from their ignorance of its benefits for students and staff and lack of exposure on their part (Hutson et al, 2022). Even though, there is observable gradual growth and sustainability in the mechanisms for faculty-induced support for OER.

However, to attain the status of a permanently funded resource, OER still requires wider support. Presently, teaching and learning centers and academic libraries remain the major sponsors of OER initiatives (McGowan, 2019).

The role of the library and the librarians in facilitating the use of OER is highly significant. They are important collaborators in the promotion

of OER materials Upneja (2020). Brown et al (2017) recently acknowledged that beyond traditional librarianship, librarians in this age could participate and collaborate with other stakeholders in what is known as embedded librarianship.

The core traditional skills learned in the library school will always be handy even in the technology-driven information environment (Murray, 2014).

Thus, librarians could support OER via advocacy, support, dissemination, advisory, creation, and management (Coyne & Alfis, 2021).

LibGuides on OER were created by OER Community of Practice (CoP); a group of academic librarians from British Columbia to coordinate collective advocacy on OER.

A guide was equally created to evaluate the quality of OER resources while they participate in organizing Open Access Week (Smith & Lee, 2017).

In some other climes, the librarians assist in organizing workshops on Creative Commons licenses and open textbooks to enlighten both the students and faculty (McGeary et al, 2020)

Methodology

This study looks at the involvement of library personnel of universities located in Osun State in the management of open educational resources vis-à-vis creation, advocacy, and discoverability of this category of electronic resources. The study population comprises ninety-one (91) librarians and seventy-two (72) library officers in the thirteen NUC-approved universities in the state.

A total sampling technique was used to select the entire one hundred and sixty-three (163) library personnel as the study sample as a result of the fewness of the population.

A descriptive survey design was used to elicit data from respondents using a structured questionnaire.

To obtain data from the targeted population, Google Form was designed and administered through the Nigeria Library Association (NLA) Osun State Chapter WhatsApp platform.

Also, hard copies of the questionnaire were administered to some other respondents via interpersonal contact. One hundred and sixteen (116) respondents filled out and submitted the questionnaire.

Data generated were analyzed using descriptive statistics which comprises tables, figures, and frequencies.

Presentation and Analysis of Data

Table 1: Advocacy for OER

	Advocacy activities for the promotion of OERs by librarians	SD	D	A	SA	Frequency
1	My library deploys its social media handles to promote and create awareness of the benefits of OERs	13 11.2%	21 18.1%	54 46.6%	28 24.1%	116 100%
2	Organization of Open Access Week is a yearly but established event in my library	6 5.2%	32 28%	63 54.3%	15 13%	116 100%
3	My library participates in the formation of a consortium of library advocates for the promotion of OER	31 27%	57 49%	21 18%	7 6%	116 100%
4	Regular public lectures/rally is organized by my library to create awareness of the availability and use of OERs	26 22.4%	61 52.5%	18 15.5%	11 10%	116 100%
5	My library regularly prints and distributes souvenirs and fliers to promote OER materials adoption	17 14.7%	58 50%	27 23.3%	14 12.1%	116 100%

Table 1 shows the options selected by respondents as advocacy efforts for promoting OERs by librarians.

The majority of 54 (46.6%) respondents agreed that their libraries use social media handles to promote and raise awareness about the benefits of OERs; 63 respondents (54%) agreed that organizing Open Access Week is a yearly but established event in their libraries; 49% of 57 respondents disagreed that their libraries participate in the formation of a consortium of library advocates for the promotion of OERs; 61 respondents (52.5%) disagreed that their library organizes frequent public lectures/rallies to raise awareness about the availability and usage of OERs, while 58 respondents (50%) disagreed that their library regularly publishes and distributes souvenir and fliers to promote OER materials adoption.

In conclusion, 63 respondents (54.3%) of the librarians agreed that the organization of Open Access Week is a yearly but established event in their libraries. It confirms Open Access Week as a generally acceptable medium by the majority of the libraries to advocate for the adoption and use of OER in academia.

Table 2: OER Content Creation by Librarians

	Involvement of librarians in OER content creation	SD	D	A	SA	Frequency
1	My library helps in the selection of quality books appropriate for OER course adoption	16 13.8%	25 21.6%	52 45%	23 19.8%	116 100%
2	My library contributes to open education through OER selection from online outlets	10 9%	39 33.6%	49 42%	18 15.5%	116 100%
3	My library designs and supports discovery systems and institutional repositories that enable access to and delivery of educational content	11 10%	23 19.8%	61 52.5%	21 18%	116 100%
4	I participate in curating collections of OER and open-access scholarly content	25 21.5%	17 14.7%	47 40.5%	27 23.3%	116 100%
5	I do partake in the assessment of OER produced by the faculty to ascertain its quality	22 18.9%	58 50%	31 27%	5 4.3%	116 100%
6	My library is involved in advising the faculty on copyright matters during the process of creating OERs	28 24.1%	46 39.6%	32 28%	10 8.6%	116 100%

Table 2 displays the options picked by respondents regarding librarian involvement in OER material creation.

The majority of respondents, 52 (45%), agreed that their library assists in the selection of quality books appropriate for OER course adoption; another majority category of respondents, 49 (42%), agreed that their library contributes to open education through OER selection from online outlets; 61 (52.5%) respondents agreed that their libraries build and support discovery tools and institutional repositories that allow access to and dissemination of educational information.

47 responses (40.5%) are involved in curating collections of OER and open-access scholarly content; Despite the aforementioned involvement of librarians in OER material creation, the majority of respondents, 58 (50%) here, disagree that they do analyze OER to determine its quality, and 46 (39.6%) disagreed that their libraries advised professors on copyright issues throughout the creation of OERs.

The aforementioned analysis has revealed that the majority of respondents, 58 (50%), deny that they review OER for quality.

This implies that academic library personnel who are professionally trained to determine the quality of resources have not lived up to the daunting task.

Table 3: Role of Librarians in OER Discoverability

	Role of librarians in ensuring the discoverability of OERs	SD	D	A	SA	Frequency
1	In my library, the cataloguing of and metadata creation for OER materials are given the needed attention	30 25.8%	45 39%	23 19.8%	18 15.5%	116 100%
2	OER materials created by the faculty are published under open licenses in my library	19 16.3%	63 54.3%	24 21%	10 8.6%	116 100%
3	To increase the rate of findability of the OERs, I participate in the redistribution and sharing of those materials to the potential users	9 7.7%	32 28%	54 46.6%	21 18%	116 100%
4	To ensure ease of accessibility, my library organizes user education for its patrons on how to locate OERs	18 15.5%	62 53.4%	29 25%	7 6%	116 100%
5	I ensure active deployment of OERs during my engagement in reference services of the university library	32 27.5%	43 37.1%	22 19%	19 16.4%	116 100%

Table 3 above also revealed the role of librarians in ensuring the discoverability of OERs.

45 respondents representing (39%) strongly disagreed that cataloguing of and metadata creation for OER materials is given the needed attention in their libraries; another majority category where 63 respondents representing (54.3%) disagreed that OER materials created by the faculty are published under open licenses in their libraries; in the opposite to above interpretation, 54 (46.6%) of the librarians agreed that they participate in redistribution and sharing of those materials to the potential users to increase the findability of the OERs; 62(53.4%) respondents disagreed that to ensure ease of accessibility, their library organizes user education for its patrons on how to locate OERs and 43 respondents representing (37.1%) disagreed that they ensure active deployment of OERs during their engagement in reference services of the university library. These data revealed that OER materials created by the faculty are published under open licenses in the library (63 respondents of 54.3%).

This is a footstep towards adequate discoverability of the available OER in academic libraries.

Discussion

The study found that the library personnel in the universities located in Osun State use social media as tools for the creation of awareness and advocacy for the use of open educational resources stating the numerous advantages of this category of electronic resources.

In their bid to advocate the course of the OER, the annual Open Access Week is organized to enlighten the populace and solicit support. However, this advocacy is restricted to individual libraries that are yet to form a consortium for joint projects on OER advocacy. Similarly, many libraries have yet to consider the organization of public lectures and distribution of fliers as alternative approaches.

Earlier studies by Coyne and Alfis (2021) and Smith and Lee (2017) indicate the contribution of library personnel to OER advocacy especially in the area of organization of

annual Open Access Week which university libraries in Osun State have embraced.

This is even though the libraries are yet to organize themselves into a consortium jointly advocating OER adoption.

Similarly, it was discovered that library personnel are deeply involved in some activities related to the creation of OERs. The personnel are instrumental in the selection of appropriate and quality textbooks that are adopted for OER by the faculty as much as they participate in the selection of OER materials from various outlets online.

However, they have not advanced to the stage of advising the faculty on the copyright implications of adopting these resources and assessing the quality of internally produced OER.

Cummings-Sauls, et al (2018) and Avila and Wray, (2018) have separately advocated the importance of the library and its personnel in collaborative librarianship that can birth the creation of OER.

Though there is still room for further deepening of the roles of the library personnel in OER creation, the current practices show a comfortable level of involvement.

The study also found that the role of the library personnel in OER discoverability is minimal. Even though the staff is actively involved in the redistribution of the available OER materials, little attention is paid to the cataloguing and creation of metadata for these information resources. Equally, these resources are not published under open licenses to enhance discoverability and ultimate accessibility to the resources.

This result aligns with the finding of Otto and Kerres (2022) and Roncovic (2021) that the OER is not properly linked to other open-licensed resources to strengthen the process of discoverability.

The position of Perifanou and Economides (2022) that metadata is often missing in OER has further been corroborated by this study. It is therefore an insight into the cause of the low level of discoverability suffered by the OER resources in the library.

Conclusion

This study has emphasized the inestimable contributions that the library personnel in universities in Osun State are equipped to offer to a growing collection of OER materials in academia.

Even though, the intervention of OER materials in resource redistribution cannot be overemphasized, it is only the collaboration of the relevant stakeholders especially the library personnel that can sustain the tempo and bring the project to fruition.

This study has further laid credence to the underutilization of the potential of library personnel in collaborative activities in academia. It is heartwarming however that the library staff is not completely blacked out.

Their contribution to advocacy, content creation, and discoverability of OER stands to boost the efforts of the faculty in promoting and propagating the adoption, organization, and sustainability of the OER.

The areas such as the inauguration of a consortium for group advocacy, connecting OER materials to open licensed platforms, giving expert advice on copyright issues, and focusing more on metadata creation for OER materials are sore points that require visitation. The libraries and their personnel should organize workshops and training to adequately guide all the personnel involved in this onerous task to further enhance their institutional learning, commitment, and dedication. Also, the integration of OER into repositories is long overdue to make the discoverability attainable.

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USE OF WEB-BASED INFORMATION SERVICES FOR ACADEMIC ACTIVITIES BY UNDERGRADUATE STUDENTS OF DEPARTMENT OF MASS COMMUNICATION, AHMADU BELLO UNIVERSITY, ZARIA

HASHIM, Abdulwaheed- (NCE, BLIS, MLS, CLN), MAJI, Aliyu Ayikeyi (DLIS, BLIS, MLS), AYODELE, Rachael O. – (DLIS, BLIS, M.Sc., CLN) & ISAH, Rakiya- (NCE, BLIS, MIM, MLIS, CLN)

Kashim Ibrahim Library, Ahmadu Bello University, Zaria[1, 2, 3, 4]
hashimabdulwaheed@gmail.com,
07067469168

Abstract

This study investigated the Use of Web-Based Information Services for Academic Activities by Undergraduate Students of Department of Mass Communication in Ahmadu Bello University, Zaria. Four research objectives was formulated to guide the study sought to find out the types of Web-Based Information Services available; the Level of awareness on web based information services; level of use by undergraduate students of Undergraduate Students of Department of Mass Communication, A.B.U, Zaria and the Challenges of Using Web-Based Information Services by Undergraduate Students of Department of Mass Communication, A.B.U, Zaria. The research method adopted for the study was descriptive survey design; the population of the study comprised Seven hundred and twenty (720) Undergraduate Students of Department of Mass Communication, A.B.U, Zaria; Two hundred and sixteen (216) were used as sample for the study. Closed Ended Questionnaire was used to collect data for the study. Data collected from the field was analysed using descriptive statistics such as table, frequency and percentage. The findings revealed Social Media Platforms, Search Engines, Online Reference Services and Web OPAC were web based information services available for undergraduate students; the level of awareness on web based information services showed that more than 50% of the respondents indicated that they are aware of the availability of the following services: Social Media Platforms, Online Reference Services, Ask-A-Librarian and Electronic Readers Services in the library; the level of use on web based information services by undergraduate students indicated that less than 50% use them on daily, weekly and monthly and the most challenges encountered in using the agricultural information resources by undergraduates were lack of awareness, lack of training on how to use the resources, frequent power failure and poor internet connectivity. The study therefore recommended that the management of the library should ensure they provide the adequate and relevant web based information services for users to access and ease for use in order to improve their academic activities.

Keywords:

Introduction

Information has played an important role in all aspects of human life of individuals in our modern society.

In this present era, the information needs of every individual have increased tremendously, which are based on its accuracy, immediate and beyond the constraints of time and place. Hanumanth (2017) stated in his study that Traditional methods of library and information services have changed tremendously in recent years because of the advancement and application of new technology, especially the internet and web technologies. So, libraries must ensure to provide the appropriate information to right patrons at the appropriate time.

Similarly, Kumari (2016) asserted that the emergence of Internet and other technologies, especially the World Wide Web has become the new technique for delivering and providing better information services and resources for the users in order to meet their information needs.

Library services refer to facilities which are provided by a library for using information resources and dissemination of information to meet the users' immediate need.

The existing library services include cataloguing, classification, circulation services, reservation, renewal, new arrivals, current contents, current awareness service, selective dissemination of information, indexing and abstracting, reference service, document delivery, inter library loan, externally purchased database, CD-ROM databases, access to other library catalogues, access to online databases, internally published newsletter, reports and journals, bibliographic services, and so on. All these services have changed its mode to an extent with web environment. (Hanumanth, 2017)

Information Services:

Information services could be seen different segments of libraries' activities in literature it is usually related to the reference services.

American Library Association gives following description of information services: the goal of information services is to provide the information sought by the user. Information service should anticipate as well as meet user needs.

It should encourage user awareness of the potential of information resources to fulfill individual information needs. “According this definition information services should be offered in regards to users’ needs.

Furthermore, information services could be divided into two main categories: assurance of information needed by users and awareness of users about available information resources and ability to find the information appropriate to given needs by themselves.

Information services are usually overlapping with teaching and learning services because librarians often educate users while offering information services to users. Information services encompass services through which librarians directly supply users with information but also interfaces created by librarians through which users could independently find needed information.

According this statement information services include reference services and browsing and searching services. This approach was supported by Katz who classifies information services into direct and indirect services.

Namely, direct services include communication of users and librarians replying to users questions. Indirect services include activities “behind scene” such as preparation and development of catalog, bibliography and all other tools which assure access to libraries’ collections.

Experts accentuate that concept of information services is necessary to connect with the concept of digital libraries and suggest three levels of information services.

Web-Based Information Services

Web based Information services are referred to as services equipped through particular website accessible on internet which provide unique access to the multiple databases.

In other word, they are described as the online platforms that provide access to various types of information, tools and resources across the Internet.

According to Madhusudhan & Nagabhushanam, (2012) in their study on Use of Web-Based Library Services in some selected University Libraries in India describes Web-based Information Services library services provided using Internet as means and library website as a gateway with the help of unified library management system.

On the user's viewpoint, web-based information services include the following: online textbooks, databases, tutorials and a virtual library of links to other useful resources. It provides the unique service of linking to full-text articles, unifying library house-keeping operations, library policies, staff listings, etc. for timely help.

Statement of the Problem

The emergence of web-based technologies has changed library users' information seeking behavior and expectations of library resources and services provision. Web based information service is one of the approaches libraries have taken to respond to the 21st century technology revolutionized environment.

However, Libraries are established to support teaching, learning, and research activities of their parent institution. Libraries are saddled with the responsibilities of acquiring, organizing, preserving, retrieving and disseminating information to the users.

Thus, libraries of today are multi-media that provide access to both print and electronic information resources to users who come to the library physically and those who access the library collections through web pages (Sangale, 2015).

Preliminary investigation by the researcher revealed that despite the report in numerous literatures that revealed universities are spending huge amount of money to subscribe and acquire web based information services to administer services and its enormous advantages for learning and research, the undergraduate students of the Department of Mass Communication, A.B.U, Zaria do not make adequate use of the web-based information services to meet their need.

To support this assertion, Popoola (2008) revealed that students are to make maximum use of library services and derive greater benefits from them, they need to be informed of their availability and how to use these services, they must be sensitized about it and their benefits must be explained to them.

Mohammed (2017) observed in her study that most library resources are not adequately utilized by students. One is therefore left wondering with the question of could this lack of adequate use of web based information services be attributed to lack of awareness, lack of competency information literacy on the parts of the students and many others.

The study aims to investigate the Use of Web-Based Information Services for Academic Activities by Undergraduate Students of Department of Mass Communication in Ahmadu Bello University, Zaria

Objectives of the Study

The following objectives below were formulated to guide the study:

1. To identify the type of Web Based Information Services is provided for Undergraduate Students of Department of Mass Communication in Ahmadu Bello University, Zaria.

2. To determine the level of awareness of Web Based Information Services among the Undergraduate Students of

Department of Mass Communication in Ahmadu University, Zaria.

3. To determine the level of Use of Web Based Information Services among the Undergraduate Students of Department of Mass Communication in Ahmadu University, Zaria.

4. To identify the challenges encountered by Undergraduate Students of Department of Mass Communication in Ahmadu Bello University , Zaria on the Use of Web Based Information Services.

Literature Review

Web Based Information Services

It is simply refers to a digital Library service that manages and develops electronic services, library websites and library staff.

According to White (2001), it can be defined generally as 'an information access service in which users ask questions via electronic means e.g., email or web forms'.

To meet the information required of users, the financial and services oriented sectors such as banks, airlines and education sector all over the global world now offers Web-based information services.

The Web-based services can be helpful to both the users and the institutes in regard to cost reduction, time saving, improving customer service and real time delivery of the services (Allahawiah, 2013).

Types of Web based Information Services:

1. **Library Webpage:** this is defined as medium for searching information about the library. It provides access to information of a library's multiple databases, e-journals, library catalogues, deliver comprehensive information about a library and to all computer based services like library collection, library timing, library working hours, list of subscribed online journals, etc.

2. **Web OPAC:** It is an online catalogue facility that enables speedy searching of library database including books, journals, periodicals and manuscripts.

3. **Bulletin Board:** "A bulletin board is an electronic communications forum that hosts posted messages and articles connected to a standard subject. It allows users to call in and either leaves or retrieves messages.

4. **Access to Database:** Several publishers these days provide web-based, computer network solutions for providing native access to their databases. Examples embrace Silver Platter, Cambridge Scientific Abstract and Institute for Scientific info.

5. **Electronic Selective Dissemination of information:** electronic SDI service was formulated to deliver current information of interest to faculty members on their desktop.

6. **Ask-A-Librarian:** these are Internet-based question and answer service that connects users with individuals who possess specialized subject knowledge and skill in conducting precision searches.

7. **Web Based User Education:** they are web guides and teaching tools found all over the net because they are easily updated, accessed and printed on demand. It provides a high degree of interactivity and flexibility to the users.

Use of Web Based Information Services

The extent to which the services are effectively utilized for teaching, learning, and research is known as use of Web based information resources.

Web based information services have become a major part of the University libraries collection in promoting teaching, learning and research. However, the University libraries make a wide range of web based information services for use by undergraduates, postgraduates, researchers and staff for various academic purposes.

These purposes includes; doing class assignments, writing term papers, augmenting class works, retrieving current literature for studies, following blog discussions on subject area of interest, searching for scholarship opportunities, searching for internship placement and for research purposes.

Kumar and Kumar (2008) in their study discovered that the purposes of using web based information services are to promote learning and writing research projects. Macaulay (2015) in his study on Availability and Utilization of Electronic resources by University students in Niger State, revealed the purposes of using of the resources for online registration, research, communication with friends and colleagues, sourcing materials for project writing, completing assignments and for other personal purposes.

Awareness of Undergraduate Students on Use of Web Based Information Services

Awareness simply means knowledge about something that is in existence or understanding a subject at the present time based on information. In other word, it is a knowledge a library user has about services or resources that exist in a particular library system.

Ruzegea (2012) identified the level of awareness of web based information services as the knowledge of its availability and other relevant information in library and online databases to improve the students in their learning processes.

Web Based Information Services is a friendly and flexible service that provides quick and easy access to information resources.

Challenges Encountered by Undergraduate Students on the Use of Web Based Information Services

Despite the huge advantages of online information resources and services, users still encounter some challenges with the use of these resources.

A number of studies have investigated students' challenges with the use of online resources; the challenges were identified as poor information technology infrastructure development (Omeluzor, 2015).

Omosekejimi, Eghworo and Ogo (2015) itemized the challenges in their study as large mass of irrelevant information, the need to filter the results from search, download delay, failure to find information, inadequate or lack of search skills, high cost of access, inaccessibility of some electronic resources and difficulties in navigating through electronic resources.

Lack of awareness, insufficient bandwidth, high cost of internet connectivity and lack of electronic information resources (Igbo and Imo, 2017); Frequent power failure, poor internet connectivity, improper guidance on use of electronic resources, non-payment of subscriptions and lack of personal computers (Ogbuiyi, et al, 2014) and slow downloading. Similarly, Ternenge and Kashimana (2019) in their research study on availability, accessibility and use of electronic information in Nigeria observed that power outages, slow and poor internet connectivity, lack of relevant resources

as challenges faced by students from use and blockage of websites (Sohail and Ahmad, 2017).

If the challenges on the use of web based information services faced by the students keep persists there is need to be look into.

Research Methodology

The study was conducted among the Undergraduate students of Department of Mass Communication, A.B.U, Zaria. Quantitative research was used for the study. Bhandari (2023) described **Quantitative research** as the process of collecting and analyzing numerical data. It can be used to find patterns and averages, make predictions, test causal relationships, and generalize results to wider populations.

Survey research design was adopted for the study. The entire population of the study is 720. A sample size of 216 representing 30% of the population was determined as recommended by Ukih (2012) as cited in (Hashim, 2021) that if a population is in few hundreds, a 30% of the population could be used as a sample size from a given population.

Simple random technique was adopted. Questionnaire was the instrument used for data collection. Two hundred and sixteen (216) copies of Questionnaire were distributed to the undergraduate students of Department of Mass Communication, ABU, Zaria with 90% return rate.

The data collected were analyzed using descriptive statistics in form of simple percentages, frequency distributions and table for the research questions.

Research Discussions and Results of the Findings:

Table 1: Types of Web Based Information Services provided for Undergraduate Students in Department of Mass Communication, Ahmadu Bello University, Zaria

Types of Web Based Information Services available	Available		Not Available	
	Frequency	%	Frequency	%
Library Webpage	96	44.4	120	55.6
Web OPAC	130	60.1	86	29.9
Bulletin Board	33	15.3	183	84.7
Electronic Selective Dissemination of information	56	25.9	160	74.1
Ask-A-Librarian	124	57.4	92	42.6
Web Based User Education	12	5.6	204	94.4
Online Databases	94	43.5	122	56.4
Knowledge Management Systems	11	5.1	205	94.9
Online Reference Services	137	63.4	79	36.6
Electronic-Learning Platforms	15	6.9	201	93.1
Search Engines	196	90.7	20	9.3
New Papers Websites	10	4.6	206	95.4
Social Media Platforms	200	95.3	16	7.4
Electronic Readers Services	116	53.7	100	46.3

Source: Researcher's Computation 2024

Table 1 shows the types of Web Based Information Services available. 200 (95.3%) indicated Social Media Platforms; 196 (90.7%) indicated Search Engines; 60% and above of the

respondents indicated Online Reference Services and Web OPAC and 50% and above of the respondents indicated Ask-A-Librarian and Electronic Readers Services respectively. While less than 50% of the respondents indicated Online Databases; Library Webpage; Bulletin Board; Electronic Selective Dissemination of information; Web Based User Education; Knowledge Management Systems; New Papers Websites and Electronic-Learning Platforms respectively.

The finding revealed that Social Media Platforms, Search Engines, Online Reference Services, Web OPAC, Ask-A-Librarian and Electronic Readers Services are the most common Web Based Information Services as identified by the respondents. While others are not commonly available as identified by the respondents lower than 50%.

Table 2: Level of Awareness on Web Based Information Services by Undergraduate Students of Department of Mass Communication, Ahmadu Bello University, Zaria

Level of Awareness on Web Based Information Services	Aware (A)		Not Aware (NA)	
	F	%	F	%
Library Webpage	92	42.6	124	57.4
Web OPAC	44	20.4	172	79.6
Bulletin Board	30	13.9	186	86.1
Electronic Selective Dissemination of information	43	20	173	80
Ask-A-Librarian	124	57.4	92	42.6
Web Based User Education	12	5.6	204	94.4
Online Databases	70	32.4	146	67.6
Knowledge Management Systems	11	5.1	205	94.9
Online Reference Services	137	63.4	79	36.6
Electronic-Learning Platforms	14	6.5	202	93.5
Search Engines	200	92.5	16	7.5
New Papers Websites	5	2.3	211	97.7
Social Media Platforms	210	97.2	6	2.8
Electronic Readers Services	110	50.9	106	49.1

Source: Researcher's Computation 2024

Table 2 above shows the Level of Awareness on Web Based Information Services by the respondents. Out of the fourteen Web Based Information Services listed in the above, more than 50% of the respondents indicated that they are aware of the availability of the following services: Social Media Platforms, Online Reference Services, Ask-A-Librarian and Electronic Readers Services in the library. While other Web Based Information Services such as Library Webpage, Web OPAC, Electronic Selective Dissemination of information, Online Databases, Web Based User Education, Online Databases, Knowledge Management Systems and Electronic-Learning Platforms were rated below 50% by the respondents.

The finding showed that majority of the undergraduate students of Department of Mass Communication are not aware of the services provided by the library which may be due to lack of knowledge and lack of the up to date information on the available services in the library. This is in line with Ruzegea (2012) Study on Awareness.

Table 3: Level of Use of Web Based Information Services by Undergraduate Students of Department of Mass Communication, Ahmadu Bello University, Zaria

Level of Use of Web Based Information Services	Frequency	Percentage (%)
Daily	28	13
Weekly	90	41.7
Monthly	50	23.1
Occasionally	200	92.6
Not at all	211	97.7

Source: Researcher's Computation 2024

Table 3 above shows less than 50% of the respondents indicated they used the web based information services on daily; weekly and monthly basis. While, 211(97.7%) do not use the web based information services at all and 200 (92.6%) indicated that they used the web based information services occasionally. The finding revealed that the undergraduate students underutilized the services which could be attributed to lack of knowledge on the part of them, lack of time and lack of awareness.

Table 4: Challenges Encountered by Undergraduate Students of Department of Mass Communication, Ahmadu Bello University, Zaria on the Use of Web Based Information Services

Challenges Encountered	Frequency	Percentage (%)
Lack of awareness	150	69.4
Poor Information Technology Infrastructure Development	70	32.4
Poor Internet Connectivity	210	97.2
Frequent Power Failure	173	80.1
Insufficient Bandwidth	102	47.2
Non-Payment of Subscriptions	101	46.8
Lack of Time	84	38.9
Lack of training on how to use the resources	211	97.7

Source: Researcher's Computation 2024

Table 4 above shows that 155(69.4%) of the respondents indicated lack of awareness; 210 (97.2%) indicated Poor Internet Connectivity; 173 (80.1%) indicated Frequent Power Failure; and 211 (97.7%) indicated Lack of training on how to use the resources as the major challenges encountered by undergraduate students of Department of Mass Communication, A.B.U, Zaria.

While, less than 50% of the respondents indicated they used the web based information services Poor Information Technology Infrastructure Development; Insufficient Bandwidth; Non-Payment of Subscriptions and Lack of Time.

From the finding, it was deduced from the analysis that the major challenges encountered by undergraduate students of Mass Communication, A.B.U, Zaria are Lack of Awareness, Lack of training on how to use the

resources, Frequent Power Failure and Poor Internet Connectivity. This was in agreement with the findings of Igbo and Imo (2017)

Conclusion:

It is very crucial for the library management to create awareness among the undergraduates by introducing proper orientation on the use of library; provide adequate Internet facilities, regular training on the use of web based information resources and stand-by generator and current and relevant services for undergraduate students in order to improve them in their academic activities.

The study revealed that Web Based Information Services are not fully used by the undergraduate students of Department of Mass Communication, A.B.U, Zaria.

Recommendations:

Based on the findings of the study, the following recommendations are made:

1. The study recommended that the management of the library should ensure they provide the adequate and relevant web based information services for users to access and ease for use.

2. The study also recommended that qualified and competent personnel should serve as e-librarians with regular training and retraining in place for the staff to be able to provide effective and quality service to library users and create awareness about the services made available for use.

3. The study recommended that the management should adequate modern ICT facilities are required for Web Based Information Services which will enhance the effective and efficient utilization.

4. The study recommended that there should be Provision of alternative power supply to cope with the problem of Frequent Power Failure such as stand-by generator, solar installation and installation of inverter.

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EMPOWERING INFORMATION SERVICE DELIVERY: THE ROLES OF WOMEN LIBRARIANS IN PROMOTING ACADEMIC LIBRARY DEVELOPMENT IN TARABA STATE, NIGERIA

Yakubu Attahiru Liman[1], PhD & Olusegun Victor Olaogun[2]

Library Department, Federal College of Education (Technical), Keana, Nasarawa State[1]

yakubuattahiruliman@gmail.com

Federal College of Complementary and Alternative Medicine of Nigeria, Federal Capital Territory, Abuja[2]
shegevic@yahoo.com

Abstract

The study investigated the empowering information service deliver, the roles of women librarians in promoting library development in Taraba State, Nigeria. This study was guided by the following research objectives: to determine the roles played by women librarians for effective information service delivery in academic libraries in Taraba State, to determine the level of services available for the women librarian in delivering the role in academic libraries studied Taraba State and to identify the challenges faced by women librarians in academic Libraries in Taraba State. The study focused on the following tertiary institutions namely; Federal University Wukari, Taraba State University Jalingo, Kwararafa University Wukari, College of Education Zing, College of Health Takum, College of Health and Midwifery Jalingo, State Polytechnic Suntai and Federal Polytechnic Bali. This study employed the use of descriptive research design. The study population consisted of 45 women librarians in academic libraries in Taraba State, Nigeria. Census techniques were used for this study. In this study, since the total number of women librarians was not large, the total enumeration sampling technique was adopted to gather the data. The findings of the study revealed that women librarians played key roles that contribute largely to library services for the benefits of the users and community service. The finding also established that women librarians organize various advocacy programmes for community services in order to promote information literacy. The study shows that challenges hindering the expected role of women librarians include lack of poor skills and competencies, inadequate knowledge of computer and office tools. The study concluded that the role of woman librarians in tertiary institutions cannot be underestimated. This is because women librarians' information service delivery has become vital in modern era in line with the global equality goal in the educational system. It recommended that there is the need for the government to train or develop the woman librarians on the dynamic of information service delivery in electronic library system, in order to cope with the information demands.

Keywords: Women Librarians, Library Development, Library Service, Academic Libraries

Introduction

Globally, the 21st century has witnessed a drastic and remarkable change in the field of librarianship. This is because the 21st century is characterized by information and digital revolutions and innovations.

The information and digital revolution is connecting cyber, virtual and physical space with advancement in digital technology which has made communication, collaboration, information flow and work easier. It has also impacted on the roles played by the library operators in order to serve the library patrons better for the overall achievement of the library goals.

The women librarians is part of the human resources that make up the workforce of the academic community. This justifies the height of their relevance in the role of providing fundamental development, services, facilities and resources in all formats for teaching and research in the institutions.

It is on this note that Odi-Owei (2018) established that excellence in research is one of the marks of a library as an institution. Women played prominence role in information service delivery in research which implies excellence in library service provision.

The services of the academic depend on meeting the educational needs of the clientele just-in-time through electronic information handling and delivery. This informs the need for a well- established digital library.

Thus, Women librarians have to be equipped with the right knowledge, skill and competence. These are necessary to create and facilitate the new knowledge; by providing effective service delivery that will enhance electronic access to digital information sources. This is aimed at satisfying the patrons' need which in turn leads to societal improvement and development.

Singh (2015) identified that a number of useful services provided in academic libraries in the digital age to include; providing quality learning space, creating metadata, offering virtual reference services, teaching information literacy, choosing resources and managing resources licenses, collecting and digitizing archival materials and maintaining digital repositories.

He further stated that academic libraries are no longer limited to printed services such as collection development, cataloguing and classification, circulation and reference services, Current Awareness Service (CAS), Selective Dissemination of Information (SDI), and bibliographic services.

As much as women librarians play vital roles in ensuring that the society enjoys knowledge and information- hybrid based libraries through the various services offered, they are not left with some setbacks.

These challenges range from the issue of inadequate training and capacity building, poor skills and competencies to manage effective information service provision, unwillingness of some female librarians in engaging themselves in personal development programmes, lack of time and inadequate provision of technological facilities and infrastructures amongst others.

The limitations highlighted above and many more are deterrent to the role of the women librarians in enhancing service delivery to library users in the ever-changing environment.

However, to overcome the identified inhibitors that have characterized the women librarian, the researchers seek to determine the possible ways these challenges could be mitigated and their negative impacts reduced to a barest minimum, hence this study.

Literature Review

The Roles of Women Librarians in the Provision of Information Service Delivery

The development in information technology has changed the work of the women librarians. There are innovative ways in which both print and digital resources can be stored, accessed, retrieved and disseminated.

The way and manner the women creates bibliographic databases, the digital catalogues and the use of barcodes to store books in digital format are archived as part of the success story of the role of the digital women librarians in this digital era.

Gaál et al. (2015) in their research maintained that the internet makes it possible for individuals to connect, collaborate and share knowledge, information, document, photo, video, etc. continuously with anyone in the world.

The ability to efficiently find, select available information to meet the need of the patrons in the electronic world requires adequate knowledge and understanding of computer and internet, in order to tap into the huge wealth of arrays of information opportunities stored in it.

In line with this, Haider (2016) states that today, students are tech-savvy, but they don't know how to find required information and they need instruction and guidance. That today's librarian is a digital guide, educating patrons about the use of digital library services and generalized digital literacy, providing virtual service to users, often through library websites.

The study of Chidi-Kalu et al. (2018) reveal that women librarians in their role should educate their patrons in such a way that they will know when they need information, identify the kind of information that will address their particular problem, find their needed information resources, evaluate the information resources, organize the information and use the information effectively in addressing their problems. Other roles of the Women librarians include the following:

i. Provision of online reference services for research and educational purposes
ii. Supports in information storage, organization and preservation and retrieval in all formats for posterity and dissemination to the user.
iii. Interacts and collaborates with users for knowledge creation, organization and management in the pursuit of excellence in service.

Information Service Delivery and Woman Librarians

Information service delivery played a key role in the preservation and access to knowledge and information as the main mandate of academic libraries alongside supporting the mission of their parent institutions.

This is because effective and efficient Information service delivery is at the forefront of supporting and providing information services to respective communities which comprises of the users.

Information service delivery provided by women librarians in handling information and library operations and information handling is what positioned and give women librarians the credit of making meaningful impact in the profession in Nigeria and the advanced world.

According to Ifidon in Chidi-Kalu et al. (2018), building a successful service requires a profile of the library and information science professional to suit the global information service needs.

One reason is that most women librarians still carries the same level of dexterity and patience she displayed in the traditional to the digital era in library development and service delivery.

No wonder scholars like Burrington (1987) and Singh (2019) argued that women

form the backbone of library and information services. More so, it is necessary that women librarians acquires skills and knowledge for continuous self-improvement, training and retraining; be vigorously active to avoid being perceived as information and technologically obsolete in this era.

The findings of the study conducted by Sawyerr-George et al. (2017) revealed that training women librarians play an important role for effective service delivery in their different libraries.

The study further revealed that for female librarians to achieve a feat in their role in ICT empowerment, it is necessary for them to be trained to be innovative and creative so that they can embrace new trends in librarianship with the use of ICT to satisfy their users (Sawyerr- George et al. 2018).

Somvir (2010), identified the 21st century skills to include information literacy skills, media literacy skills, information and communication skills, critical thinking etc. associated with the librarian's profession.

He further stated that by utilizing social competences such as empathy, persuasion, leadership and cooperation, a librarian can provide better service to the society. In line with this, Idiegbeyan-Ose, and Ilo (2013) emphasized that the modern librarian must know how to use the new sources of information skillfully.

Challenges of Information Service Delivery by Women Librarians

Literature review reveals numerous challenges confronting women librarians in the delivery of information services which have led to a wide gap in the way information is delivered.

However, in the context of this study, the major challenges identified are as follows:

i. **Insufficient facilities and equipment:** A well-established library is essential in any academic institution for the provision of standard information resources and services (Singh, 2015). With the advent of computer and ICT the nature of library operations changed, latest technologies are needed for effective provision of service delivery to satisfy the diverse information need of today's user. These technologies are lacking in most academic libraries in Nigeria due to poor budgetary allocation. This has posed a challenge to most Women librarians.

ii. **Insufficient technological skill or literacy:** Insufficient knowledge and skill on the application and use of the computer and related Information Technology (IT) pose a challenge for women librarian. Fontaine (2000) stated that there are psychological as well as educational and economic barriers among women due to a general perception of technology as a male domain. It is embarrassing and abuse to professional ethics to note that some librarians currently cannot operate a computer, or search for information on the internet. It is revealed that ICT skills among librarians in Nigeria is very low (Binta, 2013;Ademodi and Adepoju, 2009).

iii. **Inadequate funding** – Funding has been a major setback in any organization, associated with the acquisition and provision of up-to-date technological software and hardware by the institutions. Singh (2019) have reported problems of fund. Even service fee for the maintenance of software license and internet connectivity which are essential for carrying out the role is all capital intensive by nature which are beyond their budgetary allocation. Uzoigwe (2004) observed that sufficient fund is not allocated to library development and where it is allocated, it is not on regular basis and not as at when due.

These affect library development and service delivery.

Statement of the Problem

Women librarians' play key roles to advance information service delivery in modern library service delivery. Many women librarians in developed countries have taken advantage provided by libraries to promote information literacy through advocacy programmes for the benefit of effective information service delivery.

However, in developing countries, many women librarians still find it difficult to provide effective information service delivery due to poor skills and knowledge of handling library services, inability to provide required technology tools and up-to-date knowledge in digital resource handling and poor technical know-how of facilities and ICT tools in the library to foster service delivery to users.

Several studies conducted indicate that women librarians require new skills, techniques using the right technological facilities to achieve effective service delivery to the library users with changing information needs (Singh, 2015; Odi-Owei, 2018).

It has been observed that most women librarians are still struggling with these new skills in some institutional libraries in Nigeria and Taraba State in particular. The preparedness of the women librarians to embrace the change that comes with the availability and use of technological gadgets or tools is a problem.

These varying factors pose great challenges to the effective handling of information and service delivery to users by the women librarians. Therefore, the focus of this paper is to explore the desire to investigate the role of women librarians in the development of library for service delivery in Nigeria: a case study of academic libraries in Taraba State, Nigeria

Objectives of the Study

The aim of this study was to investigate empowering information service delivery, the roles of women librarians in promoting academic library development in Taraba State, Nigeria. To achieve the above aim, the following specific objectives were pursued to:

1. Determine the roles played by women librarians for effective service delivery in academic libraries in Taraba State
2. Determine the level of service delivery by women librarians in academic libraries studied in Taraba State
3. Identify the challenges faced by women librarians in academic Libraries in Taraba State

Methodology

This study was guided by descriptive research design. The study population consisted 45 of women librarians in academic libraries in Taraba State, Nigeria. In this study, since the total number of women librarians was not large, the census method would be used to gather the data.

The population units of the study consisted of 45 women librarians across academic libraries in Taraba State. This study integrated quantitative methods approaches which allow richer and better result for every unit of the population that was studied.

Therefore, forty five copies of structured questionnaires were distributed to the study population. Of the 45 copies of the questionnaire administered, 38 copies were returned. Data analysis was done using frequency count and simple percentages. Statistical package for social sciences (SPSS) software was used as tool for data analysis in the study.

Findings and Results

This section is concerned with data presentation, analysis, interpretation and discussion of findings. The results are presented and analyzed based on the research questions by the researcher's.

Research Objective 1: To determine the roles played by women librarians for effective service delivery in academic libraries in Taraba State. To address this objective the researcher identified roles played by women librarians for effective service delivery in academic libraries in Taraba State. The respondents were given statements the roles played by women librarian for effective service delivery in academic libraries and they were to answer by stating their level of agreement with them using a scale: Strongly Agree (SA) = 4, Agree (A) =3, Disagree (D)=2 and , Strongly Disagree (SD)= 1 respectively. Table 2 shows the statements that the respondents were presented with and how they responded

Objective 1: The roles played by women librarians for effective service delivery in academic libraries

Table 1: The roles played by women librarians for effective service delivery in academic libraries

	The roles played by women librarians for effective service delivery in academic libraries	**SA**	**A**	**D**	**SD**
1	Provides reference services to user	11 28.9%	25 65.7%	2 5.2%	0 0%
2	provides support for library advocacy programme	13 24.2%	20 52,5%	3 7.8	2 5.2%
3	Provides Internet Service to User's	10 26.3%	28 73.6%	0 0%	0 0%
4	Provides Information Literacy	22 57.8%	13 24.2%	2 5.2%	1 2.6%
5	Provides Corporate Social Responsibility to User's	11 28.9%	11 28.9%	15 22.0%	1 2.6%
6	Provides selective dissemination of information service to user's	11 28.9%	23 60,5%	3 7.8	1 2.6%
7	provides virtual reference service	15 22.0%	26 68.4%	1 2.6%	1 2.6%

Source: Field (2024)

The findings revealed that 36 (94.7%) of the respondent indicated that they provide reference service to user, while 2(5.2%) had divergent view.

Similarly, the finding also showed that 33 (86.8%) of the respondents revealed that they provide support for library advocacy programme, while 5 (13.1%) had contrary opinion. n the aspect of the providing internet service to user's, 38 (100%) of the respondents strongly agreed or agreed with the statement while none of the respondent disagreed or strongly disagreed.

The finding also showed that over 36 (94.7%) of the respondents supported that they provides services on information literacy, corporate social responsibility to user's, selective dissemination of information service to user's as well as virtual reference services. the implication of this findings is that female librarians played a key roles that contributes largely to library services for the benefits of the users and community service.

Objective 2: Determine the level of service delivery by women librarians in academic libraries studied in Taraba State

Table 2: Determine the level of service delivery by women librarians in academic libraries studied in Taraba State

S/N	Determine the level of service delivery by women librarians in academic libraries studied in Taraba State	SA	A	D	SD
8	Provide electronic access to digital information sources for research to clientele	15 22.0%	20 52,5%	3 7.8%	0 0%
9.	Create awareness of availability of stored knowledge repository through social media, exhibition and library orientation.	12 31.5%	26 68.4%	0 0%	0 0%
10.	Educate clientele on the use of internet and ICT	17 44.7%	20 52,5%	1 2.6%	0 0%
11.	Helps to identify library user information need and proffer quick solution to their needs.	28 73.6%	10 26.3%	0 0%	0 0%
12.	Utilize ICT for proper services to users	12 31.5%	25 65.7%	1 2.6%	0 0%
13.	Promote information literacy through advocacy programmes for community services.	10 26.3%	17 44.7%	9 23.6%	2 5.2%

Source: *Field Survey (2024)*

Analysis from the study revealed that 35 (92.1%) of the respondents provide electronic access to digital information sources for research to clientele, while 3 (7.8%) disagreed with the statement. Similarly, 38 (100%) of the respondents strongly agreed or Agreed that they create awareness of available knowledge repository through social media, exhibition and library orientation, while none of the respondents strongly disagreed or disagreed with the statement.

On the aspect of helps to identify library user information need and proffer quick solution to their needs, 38 (100%) of the respondents strongly agreed or agreed with the statement, while no respondent opposed to the statement.

The finding also showed that 27 (71.0%) of the respondents maintained that they promote information literacy through advocacy programmes for community services, while 11 (28.9%) had divergent view. The finding of the study implies that female librarian organizes various advocacy programmes for community services in order to promote information literacy.

Objective 3: Challenges of the Woman Librarian in Library Development and Services

Table 3: Challenges of the Woman Librarian in Library Development and Services

S/N	Challenges of the Woman Librarian in Library Development and Services	SA	A	D	SD
14.	Inconsistency in system breakdown and inadequate maintenance.	28 73.6%	10 26.3%	0 0%	0 0%
15	Lack of standard well –equipped e-library	8 21.0%	25 65.7%	4 10.5%	1 2.6%
16	Inadequate time for self-development programme due to work pressure in the library.	30 78.9%	8 21.0%	0 0%	0 0%
17	Lack of personal office computer affects work speed.	15 22.0%	16 42.1%	5 13.1%	2 5.2%
18	Inability to provide required technology tools and up-to-date knowledge in digital resource handling.	17 44.7%	20 52,5%	1 2.6%	0 0%
19	Unreliable power supply in the library affects internet connectivity which in turn affects online service delivery to patrons.	13 24.2%	25 65.7%	0 0%	0 0%
20	Inadequate funding sponsorship for national and international professional training.	11 28.9%	18 47.3%	8 21.0%	1 2.6%
21	Inadequate facilities and ICT tools in the library to foster service delivery to users	15 22.0%	20 52,5%	3 7.8	0 0%

Source: *Field Survey (2024)*

The finding revealed that majority of the respondents strongly agreed or agreed that they were facing challenges that ranges from inconsistency in system breakdown and inadequate maintenance, lack of standard well – equipped e-library, inadequate time for self-development programme due to work pressure in the library, lack of personal office computer affects work speed, inability to provide required technology tools and up-to-date knowledge in digital resource handling, unreliable power supply in the library affects internet connectivity which in turn affects online service delivery to patrons, inadequate funding sponsorship for national and international professional training and inadequate facilities and ICT tools in the library to foster service delivery to users.

Discussion of Findings

Objective one of the study was to determine the roles played by women librarians for effective service delivery in academic libraries in Taraba State.

The study found that women librarians provide reference service to user. The study also revealed that women librarians provide internet service to users. the study maintained that women librarians provides services on information literacy, corporate social responsibility to user's, selective dissemination of information service to user's as well as virtual reference services.

The finding is in line with a study by Sawyerr-George et al. (2017) who affirmed that women librarians play an important role for effective service delivery in their different libraries. The study also corroborates with the study by Gaál et al. (2015), who justified that the role of the female librarian cannot be overemphasized especially in the digital era where internet makes it possible for individuals to connect, collaborate and share knowledge, information, document, photo, video, etc.

The second objective is to determine the level of service delivery by women librarians in academic libraries studied in Taraba State. The study found academic librarians provide electronic access to digital information sources for research to clientele, create awareness of available knowledge repository through social media, exhibition and library orientation, helps

to identify library user information need and proffer quick solution to their needs and promote information literacy through advocacy programmes for community service. The findings are in line with study conducted by Ifidon in Chidi-Kalu et al. (2018) who argued that women librarians assist in closing gaps in building a success profile of the library and information science professional to suit the global market.

The third objectives are to identify the challenges faced by women librarians in academic Libraries in Taraba State. The study found that inconsistency in system breakdown and inadequate maintenance, lack of standard well – equipped e-library, inadequate time for self-development programme due to work pressure in the library, lack of personal office computer affects work speed, inability to provide required technology tools and up-to-date knowledge in digital resource handling, unreliable power supply in the library affects internet connectivity which in turn affects online service delivery to patrons, inadequate funding sponsorship for national and international professional training and inadequate facilities and ICT tools in the library to foster service delivery to users.

The finding of this study is in line with study conducted by Ramesha and Kumbar (2004), who opined that poor infrastructure facilities, inconsistency in policy statement, weak financial support, poor training and poor knowledge were prominent among women librarians in developing countries especially in Africa and in particular Nigeria.

Conclusion

The roles of woman librarians in academic libraries have witnessed a remarkable change in library service provision. As a result, the role of Woman librarians has gained tremendous recognition. Unfortunately, the finding implies that poor knowledge of the Information Technology and other modern facilities were still prominent among the respondents to provide efficient and effective functioning of library development and services.

This is because women librarians' information service delivery has become vital in modern era in line with the global equality goal in the educational system. Women librarians are also growing developments and strategies in library services.

The impact of the role of Woman librarian was demonstrated in the following ways: delivering of advisory service to users, providing clienteles effective learning space, library advocacy and community service; provision of internet service; encourage information literacy programme; provision of corporate social responsibility and virtual reference service. They also assist to educate library users in identifying information problem. The vast majority of library users in tertiary institutions rely on the resourcefulness and dynamism of the female librarian.

Recommendations

The study recommends based on the findings as follows:

1. There is the need for women librarians to be provided with more challenging roles for effective service delivery in line with challenging brought by the profession in the 21st century

2. There is the need for the government to train or develop the woman librarians on the dynamics of information service delivery in electronic library system, in order to cope with the information demands

3. There is also need to overhaul the challenges faced by woman librarian in tertiary institutions of learning. This would help managers of such institutions library and relevant stakeholders to design programmed that would motivate their contribution and promote female participation in library services.

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INFLUENCE OF THE USE OF RECORDS RETENTION SCHEDULE IN SHARI'A COURTS FOR DISPENSATION OF JUSTICE IN KADUNA STATE

Dr. Abdulhamid Liman Gambo
Kashim Ibrahim Library, Ahmadu Bello University, Zaria.
08034956468

Abstract

The study explores the influence of records retention schedules in Shari'a courts on the dispensation of justice in Kaduna State, Nigeria. Shari'a courts, which handle cases under Islamic law, are a critical component of the Nigerian legal system. Effective records management is essential for ensuring transparency, accountability, and efficient decision-making in these courts. To investigate the specific influence of records retention schedules on the justice system in Shari'a courts, the study employed a quantitative approach using a cross-sectional survey. The population included 259 Shari'a court staff, with a stratified sampling technique used to select 143 staff members (53%). Data were collected using a closed-ended questionnaire, revealing that General Records Retention Schedule and Custom Records Retention Schedule influences dispensation of justice in Shari'a courts in Kaduna State. The study concluded that the use of records retention schedules significantly impacts the dispensation of justice in Shari'a courts in Kaduna State. Based on these findings, the study recommends that the courts management should mandate all record managers to strictly adhere to the constructs of retention schedule in their everyday record management practices.

Keywords: Influence; Records Retention, Shari'a Courts, Justice Dispensation, Kaduna State, Records Management.

Introduction

A records retention schedule is a crucial tool for managing an organization's records, specifying how long different types of records should be kept and when they should be disposed of or archived.

This schedule ensures compliance with legal and regulatory requirements, supports operational efficiency, and helps manage information lifecycle effectively (Junaid, 2024).

By categorizing records based on their administrative, legal, fiscal, and historical value, organizations can systematically control the retention and disposal processes, reducing the risk of data breaches and ensuring that vital records are preserved (ISO, 2022). Implementing a well-defined records retention schedule also aids in minimizing storage costs and optimizing space, as it prevents the accumulation of unnecessary documents (ARMA International, 2013).

Furthermore, it facilitates easier retrieval of records, enhancing decision-making and operational continuity (Usman, 2022).

The use of records retention schedules in Shari'a courts is essential for ensuring the proper management and preservation of legal documents, thereby supporting the integrity and efficiency of the judicial process.

These schedules help Shari'a courts systematically determine how long various types of records should be maintained before they are archived or disposed of, aligning with both Islamic legal principles and contemporary regulatory requirements (Khan, 2019). By implementing a records retention schedule, Shari'a courts can ensure that critical documents are retained for appropriate periods, facilitating accurate record-keeping

and timely retrieval of information necessary for legal proceedings (Hussain, 2020).

Additionally, such schedules aid in reducing unnecessary storage costs and mitigating the risks associated with the mishandling or loss of records, ultimately contributing to more efficient and transparent court operations (Abubakar, 2023).

The use of records retention schedules in Shari'a courts is pivotal for the effective dispensation of justice, as it ensures that essential legal documents are systematically managed, preserved, and readily accessible when needed.

These schedules dictate the appropriate duration for retaining various types of records, thus aligning with Islamic legal requirements and contemporary regulatory standards (Khan, 2019). By implementing these schedules, Shari'a courts can maintain the integrity and accuracy of case files, facilitating swift and fair legal proceedings (Hussain, 2020).

Furthermore, retention schedules help in minimizing administrative burdens and reducing storage costs, while also safeguarding sensitive information, thereby enhancing the overall efficiency and transparency of the judicial process (Abubakar, 2023).

This structured approach to records management supports the courts in upholding justice by ensuring that relevant documents are available for reference and legal decision-making.

Statement of the Problem

A significant problem affecting the dispensation of justice in Kaduna State's Shari'a courts is the inconsistent application and utilization of records retention schedules. This inconsistency leads to difficulties in maintaining the integrity, accessibility, and security of legal documents, which are essential for effective judicial proceedings. The lack of standardized records management practices can result in misplaced or lost records, delayed court processes, and potential miscarriages of justice (Hussain, 2020).

Furthermore, without a properly implemented retention schedule, there is a heightened risk of non-compliance with both Islamic legal requirements and modern regulatory standards, thereby undermining the courts' operational efficiency and transparency (Khan, 2019).

Addressing these issues is crucial for ensuring that the Shari'a courts in Kaduna State can uphold justice by maintaining a reliable and systematic approach to records management (Abubakar, 2023).

Research Question

i. To What extent do Records retention Schedule used in Shari'a Courts influence dispensation of justice in Kaduna State?

Hypothesis

i. **H_0^1** There is no significant difference among Shari'a Courts in Kaduna State in the schedule they employ to retain Court Records.

Literature review

The use of records retention schedules in Shari'a courts is a critical component of effective judicial administration, ensuring that legal documents are systematically managed, preserved, and accessible for the dispensation of justice.

According to Baffa and Muhammad (2024), implementing a structured records retention schedule helps Shari'a courts maintain the integrity and reliability of court records, which are essential for upholding the principles of justice. Baffa and Muhammad highlight that retention schedules provide clear guidelines on how long various types of records

should be kept, ensuring compliance with both Islamic legal principles and contemporary regulatory requirements.

This structured approach minimizes the risk of lost or misplaced records, which can otherwise lead to delays and inefficiencies in the judicial process.

Furthermore, Bello (2021) emphasizes the importance of records retention schedules in enhancing the efficiency of Shari'a courts. By systematically organizing and disposing of records that are no longer needed, courts can optimize their use of physical and digital storage space, reduce administrative burdens, and improve the speed and accuracy of information retrieval.

Bello notes that this is particularly important in the context of increasing caseloads and the growing complexity of legal proceedings in many Shari'a courts. Effective records management supported by retention schedules can significantly streamline court operations, making it easier for judges and court staff to access relevant information promptly and make informed decisions.

Mohammed (2019) discusses the legal and regulatory implications of records retention in Shari'a courts, highlighting the necessity for these courts to adhere to both Islamic legal frameworks and modern information governance standards.

Mohammed argues that records retention schedules help ensure that documents are preserved for the appropriate duration, thereby supporting legal accountability and transparency.

By following these schedules, Shari'a courts can demonstrate their commitment to upholding justice and maintaining public trust. Moreover, compliance with established retention schedules helps mitigate legal risks and protects courts from potential litigations arising from the mishandling or premature destruction of records.

Despite the benefits, the literature also points out challenges in the implementation of records retention schedules in Shari'a courts.

Baffa and Muhammad (2024) identify a lack of standardized practices and insufficient training for court staff as significant barriers.

Without proper training and awareness, staff may struggle to adhere to retention schedules, leading to inconsistencies in records management.

Bello (2021) further underscores the need for continuous professional development and capacity-building initiatives to equip court staff with the necessary skills and knowledge to manage records effectively.

Addressing these challenges is crucial for optimizing the use of records retention schedules and ensuring the efficient and just dispensation of legal proceedings in Shari'a courts.

Methodology

The use of records retention schedules in Shari'a courts is essential for effective judicial administration, ensuring that legal documents are systematically managed, preserved, and accessible for dispensing justice.

The study's target population comprised 259 staff members responsible for Shari'a Courts Records across the Local Government Areas of Kaduna State.

A stratified sampling technique was applied to select a representative sample, resulting in the inclusion of 143 Shari'a Courts Records staff, representing 40% of the total population.

Data collection was carried out using a closed-ended questionnaire. To ensure the instrument's reliability, a pilot study was conducted over three weeks at Upper Shari'a Courts in Kano State, yielding a Cronbach's alpha coefficient of 0.98.

Data analysis involved both descriptive and inferential statistics. Descriptive statistics, such as frequency, percentages, means, and standard deviation, were used to address research questions. Additionally, inferential statistical techniques, specifically one-way ANOVA, were employed to test the research hypothesis.

Descriptive analysis

Extent at Which Records Retention Schedule Used in Shari'a Courts Influence Dispensation of Justice in Kaduna State

Records retention schedule addresses the question of how long should Shari'a records stay before their eventual end in the records cycle. Two schedules in this regard are captured in table 1.

Table 1: Influence of Records Retention Schedule on Dispensation of Justice in Kaduna State

S/N	Record Retention Schedule	VHE	HE	M	LE	VLE	T	%	M	SD
1	General Records Retention Schedule	33	23	31	5	4	96	67.1	2.847	2.562
2	Custom Records Retention Schedule	32	22	29	7	5	95	66.4	2.817	2.512

Key: VHE=Very High Extent, **HE**=High Extent, **M**=Moderate, **LE**=Low Extent, **VLE**=Very Low Extent, **T**=Total, **%**=Percentage, **M**=Mean, **SD**=Standard Deviation

Table 1 discloses the extent records retention schedule the Shari'a courts in Kaduna State use influence dispensation of justice in the State. In an order of high mean score which show the extent, General Records Retention Schedule with Mean value of 2.847(SD=2.562) is to a very high extent influence dispensation of justice in Shari'a courts in Kaduna State. In the same vein, Custom Records Retention Schedule with Mean value of 2.817(SD=2.512) which is almost at par with former is substantially used and as such, influences dispensation of justice in Shari'a courts in Kaduna State.

The finding that the extent of Shari'a Courts records preserved influences the dispensation of justice in Kaduna State is supported by existing literature.

The use of modern records management techniques, including photocopying machines, and the adoption of tight security measures, including the use of locks, bars, alarms, and CCTV cameras, are crucial to the effective preservation and accessibility of court records and, thus, to the dispensation of justice in Shari'a Courts in Nigeria. The finding that the extent of Shari'a Courts records preserved influences the dispensation of justice in Kaduna State is supported by existing literature. For example, a study by Abdulrauf and Mohammed (2015) on the impact of records management on the administration of justice in Shari'a Courts in Nigeria found that effective records management enhances the quality of judicial decision-making and reduces delays in case processing.

The study emphasized the need for Shari'a Courts to adopt modern records management techniques, including the use of photocopying machines and electronic storage systems, to improve the preservation and accessibility of court records.

Similarly, a study by Abubakar (2024) on the challenges of records management in Shari'a Courts in Kano State, Nigeria, identified inadequate preservation and security of court records as major challenges that negatively affect the dispensation of justice. The study recommended the use of modern records management techniques and security devices, including CCTV cameras and alarms, to

improve the preservation and security of court records.

Furthermore, a study by Dikko et al. (2021) on the role of records management in enhancing the quality of justice delivery in Nigerian courts found that effective records management is critical to the dispensation of justice and that modern records management techniques and security devices are essential to ensure the preservation and accessibility of court records.

Hypothesis One: There is no significant difference among Shari'a Courts in Kaduna State in the schedule they employ to retain Court Records.

Table 4.3.4: Analysis of Variance (ANOVA) statistics on difference among Shari'a Courts in Kaduna State in the schedule they employ to retain Court Records.

Descriptives
Schedule_for_Retention_Court_Records

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Sabon Gari	26	6.3077	2.54196	.49852	5.2810	7.3344	3.00	11.00
Makarfi	8	5.5000	2.07020	.73193	3.7693	7.2307	3.00	9.00
Zaria	27	6.2593	2.50527	.48214	5.2682	7.2503	3.00	11.00
Kaduna North	31	6.1613	2.43717	.43773	5.2673	7.0553	3.00	11.00
Giwa	11	5.2727	2.00454	.60439	3.9261	6.6194	3.00	9.00
Kaduna South	18	6.2222	2.43879	.57483	5.0094	7.4350	3.00	11.00
Jama'a	8	6.6250	2.82527	.99888	4.2630	8.9870	3.00	11.00
Kagarko	8	5.6250	1.92261	.67975	4.0177	7.2323	4.00	9.00
Kachia	6	6.8333	2.99444	1.22247	3.6909	9.9758	3.00	11.00
Total	143	6.1329	2.40375	.20101	5.7355	6.5302	3.00	11.00

ANOVA
Schedule_for_Retention_Court_Records

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	19.682	8	2.460	.412	.912
Within Groups	800.793	134	5.976		
Total	820.476	142			

Post Hoc Tests
Homogeneous Subsets

Schedule_for_Retention_Cort_Records
Scheffea,b

Sharia_Courts	N	Subset for alpha = 0.05
		1
Giwa	11	5.2727
Makarfi	8	5.5000
Kagarko	8	5.6250
Kaduna North	31	6.1613
Kaduna South	18	6.2222
Zaria	27	6.2593
Sabon Gari	26	6.3077
Jama'a	8	6.6250
Kachia	6	6.8333
Sig.		.969

Outcome of the Analysis of Variance (ANOVA) statistics showed that There is no significant difference among Shari'a Courts in Kaduna State in the schedule they employ to retain Court Records.

Reasons being that the calculated p value of 0.912 is above the 0.05 alpha level of significance and the computed F value of 0.412 is below the 3.00 F critical value at df 8.

The mean level of opinion on the schedule they employ to retain Court Records are 6.307, 5.500, 6.259, 6.161, 5.272, 6.222, 6.625, 5.625 and 6.83 for sharia courts of Sabon Gari, makarfi, Zaria, Kaduna North, Giwa, Kaduna South, Jama'a, Kagarko and Kachia respectively.

The Post hoc mean comparison Scheffe test showed that all the mean were put in one subset indicating that statistically they have the same level of opinion on the schedule they employ to retain Court Records irrespective of the sharia courts location within the state.

Therefore, the null hypothesis which state that There is no significant difference among the Shari'a Courts in Kaduna State in the schedule they employ to retain Court Records. The hypothesis is hereby accepted and retained.

Conclusion

The research concludes that the use of records retention schedules significantly impacts the dispensation of justice in Shari'a courts in Kaduna State.

The research highlights that the General Records Retention Schedule and the Custom Records Retention Schedule both substantially influence judicial processes.

These findings are supported by existing literature, which emphasizes the importance of modern records management techniques, such as photocopying and electronic storage systems, alongside robust security measures like locks, alarms, and CCTV cameras, for preserving and accessing court records effectively.

Effective records management not only enhances the quality of judicial decision-making but also reduces delays in case processing, ensuring a more efficient and fair justice system in Shari'a courts.

Addressing the challenges of inadequate preservation and security of court records is essential for optimizing the use of records retention schedules and improving the overall administration of justice in Kaduna State.

Recommendation

i. The courts management should mandate all record managers to strictly adhere to the constructs of retention schedule in their everyday record management practices.

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DETERMINING WHO IS A LIBRARIAN: SKILLS COMPETENCIES FOR THE 21st CENTURY LIBRARIAN

OZOR Stella Enwelimnkem (MS) [1], Elijah Korshima GBISHE[2] & Suleiman T. SULEIMAN[3]

Head of Library[1]
Nigerian Law School nkemstella@yahoo.com

Council of Legal Education[2&3]
Nigerian Law School Kano Campus

Abstract

The Study Focused On Determining who is a librarian: skills, competencies for the 21st century librarian, The objective was to explore how professional Librarians assess their information literacy (IL) and which knowledge, skill and attitude they consider important in facilitating the developing of IL of library users.

Librarians need knowledge and skills in pedagogy and andragogy, instructional design, information technology, foreign languages, marketing, information sources and databases as well as on learning domain. The Paper also highlighted the increasing role of technology in libraries has a significant impact on the changing roles of librarians. How the 21st century librarian is required to be very much updated of technological changes, Social skills, personal characteristic and attitude of librarians are very important in facilitating IL. Additionally, some of these skills may not be as important as others. The place of employment will have a large impact on exactly what is needed to thrive in a particular position in a particular job and the specific competencies most important in that occupation. The study expressed the view that all librarians and information professionals must be able to advice users individually to facilitate their information literacy IL, but not all should be required to deliver courses and lectures for a group of students or library users. Way forward, librarians should always leverage on the available opportunities in information technology IT, so as to keep them abreast of the latest innovation in Librarianship.

Keywords: Information Literacy, information, competency, competency profile, standard, Librarian, 21st century.

Introduction

Competency profile has been used within many professional groups to help chart professional progress and define goals and objectives. National level statements and standards across multiple institutions.

Competencies for a profession generally list or group a series of knowledge, skills, abilities and behavior that define and contribute to performance.

Competencies can be used to design and develop job postings, positions, descriptions, training and education programs and performance evaluation programs (Federal Librarians competencies, 2008). This competencies profile commissioned by the Canadian Association of Research Libraries CARL Building capacity subcommittee (formally

the Library Education Working Group, 2006-2009), is intended as a guide to help librarians working in libraries, information centers manage their careers, set meaningful professional development goals and align those goals with the missions of their respective parent organization.

The ability of an individual to apply a specific set of knowledge, skills, and abilities in a defined work environment is known as competency. According to CARL (2010), competencies form the foundation for skill standards, encompassing the knowledge, behaviors, skills, and abilities that organizations expect their staff to demonstrate for workplace success.

Competency represents the practical application of skills and knowledge that enables individuals to effectively carry out their work responsibilities. As stated by Uzohue and Yaya (2016), both personal and core competencies are necessary for librarians and other information professionals to successfully deliver high-quality, filtered, and actionable information.

While personal competencies require the ability to effectively communicate by presenting ideas clearly and negotiate with confidence and persuasiveness, professional competencies relate to information professionals' knowledge of information resources, access, technology, and management and the ability to use this knowledge as a basis for providing the highest quality information service.

Information professionals of the 21st century must be multi-skilled and prepared to work in a virtual environment with information technology tools and technologies. Hill (1996) confirmed that it will become clear that information professionals should possess online skills, quick reference skills, communication skills, etc. Knowledge management is a multi-dimensional discipline and requires a demanding mix of skills and competencies. In light of this, information professionals today must work harder to make themselves proactive and do their best to competencies for the job at hand.

A plethora of literature exists regarding the competencies and skills required of a 21st-century library professional. Tennant (1999) lists several key personal attributes, including the ability to learn continuously and quickly, flexibility, innate skepticism, a willingness to take risks, an enduring public service perspective, strong interpersonal skills, the capacity to enable and foster change, and the desire and ability to work.

Omekwu (2003), mentions basic knowledge of computers and their capabilities; Competency with search engines; online facilities; e-mail; internet navigator tools, web browsers and web file formats; database software; internet creation and administration know-how. Krishnan (2011) lists critical thinking and problem solving, creativity and innovation, media literacy, ICT literacy, flexibility and adaptability, as well as communication and teamwork, as some of the other 21st century talents. We are acquainted with the aforementioned talents; the difficulty lies in utilizing them to provide efficient library services.

A key component of any organization is its human resource base, which determines much of its success or failure. In the 21st century, librarians must adapt to a changing environment as a result of information and communication technology (ICT). Moghaddam (2009) notes that specialized human resources, such as librarians,

are essential to success and dynamism. LaRue (2012) is adamant that a library's most valuable asset is its expert staff. Tanawade (2011) noted that it is time to publicize ourselves, our professionalism, and the skills we have to offer. Based on the aforementioned, the librarian of the 21st century is no longer one who sits behind the reference desk answering simple reference questions but rather an active marketer who sells the library's products and services to his community at every opportunity. He packages current information sources and delivers on point.

According to him, librarians have the power to change lives and build community. But in order to do this, they have to leave their desks and buildings and demonstrate to the community what a powerful tool they are.

Librarians can also use this profile to identify strength and gaps in their personal competencies in order to find out their portfolios. Library Directors and human resource managers, moreover, can employ it as a compass or checklist of desirable competencies when hiring new librarians or when identifying training and development opportunities for existing librarians.

Libraries as a collective entity can use the competence profile to market the library profession and recruit new talent. This core competencies profile addresses the recruitment and restructuring issues inasmuch as it presents a set of key skills, attributes, and attitudes which are suggested as integral to building and maintaining a nimble staff which ably serves its community and continually adapts to a dynamic, constantly evolving research/information landscape.

To maintain the leading position that academic libraries hold in assisting teaching, learning, and research, librarians as the traditional guardians of information must be aware of these profound shifts and make use of their technological know-how and creative output. Therefore, in order to fulfill the evolving information demands of their clients, librarians in the 21st century will need to possess competent abilities that will improve their ability to provide successful library services.

So far, the standards in this profile may apply to particular institutional setting, individual libraries may place greater or lesser emphasis on specific portions of competencies that follow. The profile attempts to reflect the unique compositions of competencies required by academic librarians working in intense 21st century academic research environment. The profile was design specifically for use in Canada but the authors summarize that the basic concepts may also be appropriate in other technologically advanced countries.

Librarians are increasingly called upon, not just to support the research of others on campus but to be researchers in their own right. More and more academic librarians produce research and scholarly work on their own to help them gain better knowledge of the profession and to contribute back their own knowledge, skills and experience. Librarians will increasingly be required to conduct research in order to meet condition of employment (i.e. to meet criteria for promotion and tenure of equivalent).

Problem Statement

Information workers need to possess a variety of skills due to the demanding information and research environment in the educational Sector. Researchers, instructors, and training programs in academia have high standards for librarians and expect them to provide proactive services. Librarians must develop their competences in order to meet these demands.

According to professional skills, a librarian should be proficient in creating bibliographic tools, searching literature, and offering reference services. Along with these other skills, he or she should have similar proficiency in networking, communication, and negotiation (personal competencies). To prepare librarians for the difficulties of an unpredictable and changing world, the twenty-first century demands new knowledge, competences, and learning approaches. To train librarians for life outside the library, a new set of skills is required.

Literature Review

The field of library and information science (LIS) has produced a wealth of international literature that focuses on the variety of skills that librarians, particularly those working in academic libraries, need to possess.

Gulati and Raina (2000), for example, approached the perspective of knowledge management to present the professional competencies required of library and information professionals, mentioning skills like collection development, collection processing, collection service, and user education as professional competencies in the knowledge age.

Given the evolving nature of university virtual learning environments, IT skills, particularly those related to the internet, are crucial for information professionals, but they also need to maintain traditional skills (Biddiscombe, 2001).

According to Heinrichs and Lim (2009), future librarians will be expected to have training in web design, database development, and multimedia skills. Since librarianship now has to deal with the provision of information in this digital era, the methods used to share knowledge and information have also changed with the introduction of wikis, web portals, blogs, and instant messaging capabilities.

These new tools require expertise in developing multimedia, such as text, audio, and video for the web environment, conducting research using Google and Wikipedia, and providing a platform for knowledge sharing through wikis, blogs, and other tools.

Cardwell (2009) compared the present level of skills with the required standards of competencies among the librarians of the Deakin University Library. This study helped to connect the current review process of the librarians with the future staff development program. Hernández (2010) pointed out a unique competency for university librarians.

It is about the role of librarians in the development of information competencies in teachers, researchers and students of the universities. The author mentioned this role of university librarians as “high-value competency” for their academic community.

Machala and Horvat (2010) emphasized on lifelong learning for librarians to acquire, sustain and enhance their general and core competencies. They concluded that core skills for librarians are customer oriented and technology driven in bibliographical outlook.

In order to narrow down a skill set for library directors and aspiring managers, Jordan (2011) carried out an intriguing study. In the first round of the survey, he began with 34 competences. In the second phase, the list of skills was reduced to 18.

In the end, it was narrowed down to eight essential and valuable competencies for the library managers in the third cycle. Among the final list of essential skills were honesty, customer service, and Priority order for responsibility, trustworthiness, zeal, taking risks, resource management, and inventiveness.

The variety, relevance, and usability of information and communication in university libraries can be increased by librarians with the use of ICT skills, as stated by Bamigboye et al. (2013). For the University of South Florida librarians, Smith et al. (2013) created a customized list of ten essential competencies.

They determined that the following factors determined an academic librarian's performance: teamwork, initiative, problem solving, adaptability, productivity, quality of work, communication, standards of service, and people management. Sa'ari et al. (2013) noted that university librarians' inventive performance in the context of Malaysian academic libraries was characterized by his entrepreneurial competencies.

Finding possibilities, igniting creativity, and tactical thinking are all parts of the entrepreneurial skill set. Lefevre and Terence (2013), state that academic librarians need to be proficient in digital publication.

An Environment Scan: Challenging Traditional Roles

The essential role of the librarian has not changed regardless of his or her specific position; the librarians' central mandate continues to be bringing information seekers and information sources together.

This objective remain the same, whether the individual is creating metadata, answering a question at a reference desk, teaching a course or constructing a new electronic service.

The environment within which librarians execute their core mission, however, has changed drastically. Researchers are turning away from traditional publishing venues in favor of emerging-vetted forums to disseminate data and research findings.

Students arrive on campus with their information seeking habits and strategies already formed, and with experience in a host of new sources and new technologies. Transformative technologies and the behaviors they engender have radically changed the creation and distribution of scholarly journals, data and other research outputs (Ross and Sennyey, pp.145-146). Scholars are adapting the ways they teach and the ways they conduct research to a new and ever changing digital information environment (ibid).

The academic library is constantly challenged to remain a vital part of this changing

environment. A key part, perhaps the key part, in meeting that challenge is to ensure that librarians' roles transition to meet evolving needs.

New areas of expertise are developing as are new opportunities to provide innovative, value-added services for the students and researchers in the academic community. Across the country, librarians and academic librarians are reassessing the role of the librarian within the academy and this CARL competency profile provides a national frame work to help in that reassessment.

Core competencies for 21st century CARL Librarians draws from other existing librarian competency statements and from competency research in general (Rocchi, 2008); ARL, 2001; SLA, 2001; Federal Library's information centre, 2008; ALA, 2008). This document also fulfills a recommendation of the CARL Library Education Working Group's final report in May, 2008.

University librarians in Nigeria are proficient in word processing and email usage, but Ayoku and Okafor (2015) discovered that their understanding of search engines and directories beyond Google and Yahoo is limited.

They lack familiarity with subject gateways, specialized databases, and certain open-access library databases; they are ignorant of database management; they are not proficient in web design; and they are not conversant with web design software. They also lack comprehension of the process of evaluating and cataloging electronic resources.

Key Components of the New Model

The work of the 21st century CARL Librarians continues to be grounded on a solid foundation of professional practice. The successful practitioner develops expertise in specific areas, build and maintains a strong well rounded understanding of the library, the campus, and the larger scholarly communication environment.

Interpersonal skills remain as key components of the CARL librarian's arsenal. Traditional skills, like written and verbal communication, are still important but increasing emphasis is being placed on the capacity to create and nurture partnership, develop innovative new programs and to market the library to the campus community.

The new academic library practitioner is expected to be a strong advocate for the library and its central place in the School's teaching, learning and research mission. The connect with administrators and leaders, are often front-and-centered with faculty, students and are also increasing at the table when campus wide IT decisions are made.

Librarians advocate for the library's central place in campus life by taking their story to the entire University (School) community and beyond when and where appropriate (Dupuis, P.13). The expectation of strong interpersonal skills is standard practice for academic librarianship, and it will continue to grow in importance.

Expectations for competence in management and leadership have increased dramatically. As leaders, academic librarians are expected to influence, motivate and challenge

their colleagues and their community to advance library and institutional goals and objectives.

Management skills are no longer expected only of those librarians in administrative positions. Rather, all librarians should understand the principles of budget planning, and facilities, staff and project management.

Librarians holding management positions would be expected to develop their knowledge and skills in these areas to a higher level, to enable them to effectively manage the library and its resources. Librarians are also taking on new teaching roles within the academy.

They are partnering with faculty to teach information literacy (IL) to their students. They are working with their instructional technology/teaching support centres to enhance the resources available to instructors. They are seeking out, and often earning seats at the table when key decisions are being made concerning support software and systems.

They share with faculty the interest in helping students/staff use information efficiently and ethically in a "copy and paste world" (Wilson and Linke, 2009).

Competencies for Librarians in the 21st century

With differences in emphasis depending on the nature of individual academic/research librarian position, the following is presented as a holistic compendium of core competencies for librarians working in an intense research environment.

1. **Fundamental knowledge**

All librarians should have a strong foundational knowledge of:

(a) The social, cultural, economic, political, and information environment within which they work.

(b) Librarianship and professional practice

i. The ethics, values and foundational principles of the library and information profession.

ii. The role of the library in the promotion of intellectual freedom through the development and preservation of the scholarly research record.

(c) The library or library system within which they work

i. Structure (the divisions, department, Unit).

ii. Decision making bodies and procedures

iii. Budget process

iv. Key policies and procedures

v. Key collection strengths (subject areas, format, etc.)

vi. Advisory committees (do they exist? Mandate?)

(d) The larger institutional organization

i. The campus environment

ii. Organizational structure (where does the library fit in)

iii. Institutional decision making bodies and processes

iv. Institutional budget process (how is funding allocated, within the University/School?)

v. Institutional mission, goals and objectives

(e) Scholarly communication models and practices (including institutional repositories, open access journals data management).

2. Interpersonal Skills

All librarians should have the following skills:

i. Adaptability, flexibility and eagerness for new experiences and knowledge

ii. Communication and advocacy-effectively conveying the importance of libraries to their parent institutions, to their target audiences/constituencies, and advancing of the values of the library profession (e.g. empowering users to be self-sufficient, freedom of expression, upholding to the right to access information and knowledge for future generations, etc)

i. Negotiation- working with others to arrive at mutually acceptable/beneficial solutions.

ii. Change management – being able to work effectively in the face of ambiguity; open mindedness to change and adaptation of work habits/behavior to different conditions.

iii. Making decision- making well informed decisions in a manner that is perceptive of the implications; committing to actions even when faced with uncertainty in order to fulfill organizational goals.

iv. Problem Solving- Identifying problems, determining relevance and accuracy of related information, and using good judgment to come up with solutions; possessing the ability to manage and resolve conflicts/disagreements in constructive manner.

v. Initiative- the capacity to identify issues and to develop and implement solutions to address those issues

vi. Collaboration- working with diverse groups, in and out of the library, in pursuit of shared goals and with an appreciation of diverse perspectives; taking library's story into the community

vii. Marketing- promoting the expertise, services, collections, and facilities to the library to a varied clientele (e.g. undergraduate students, graduates, and faculty in all discipline and making the case to administrations for the library as a vital institution in the research enterprise and for teaching and learning.

viii. Mentoring- providing useful advice and feedback to new members of the profession to help them attain success in the field and in their new positions

ix. Writing Skill- preparing persuasive grant proposal or reports

x. Presentation Skills- ability to speak in front of audience with or without technology.

3. Leadership and Management

All librarians should commit and develop the following:

i. Leadership- influencing and motivating others to strive for excellence; able to adapt to a variety of working/learning styles, scenarios and organizational cultures and to lead change within the organization.

ii. Financial Management- understanding the principles of planning and budgeting in academic libraries

iii. Human resources Management- understanding the principles of effective personnel practices and human resource development.

iv. Risk Management- understanding the advantages and disadvantages of any action or decision and being able to effectively evaluate both to support any decision made

v. Project Management- planning, organizing and managing resources to successfully complete specific project objectives within a stipulated duration of time
vi. Assessment and Evaluation- understanding the concepts and methods for service, resource and project evaluation and outcomes assessment.
vii. Partnership and collaboration- understanding the reasons and strategies for developing collaborations and partnership with relevant stakeholders and communities.

4. Collections Development

All libraries should have a foundational knowledge of the following:

i. Scholarly publishing cycle- understanding the life cycle of scholarly publishing, from creation through various stages of use to disposition
ii. Collection development and management-understanding the concepts, issues and methods related to the acquisition, and disposition of resources , including knowing collection strengths and library and institutional goals and objectives for resources development
iii. Digital curation- understanding best practices for the selection, collection, presentation, description, organization, and archiving principles for digital documentation and research data in various formats.
iv. Digital Presentation- understanding of the principles, activities, policies, procedures, and services for persistent access.
v. Management and preservation of collections – basic understanding of the management and preservation methods for general collections and for rare books and archives.
vi. Records Management- understanding how information is organized for easy identification and retrieval, including cataloguing and metadata standards for all formats.

5. Information Literacy

All librarians should have a strong understanding of and commitment to the following:

i. Information Literacy – principles of information literacy in the academic environment, including numerical and data literacy
ii. Learning and teaching – knowledge of learning models and strategies as well as relevant teaching pedagogy and models for the academic environment.
iii. Institutional teaching and learning – knowledge of institutional teaching and learning programmes and goals to effectively connect with stakeholders and integrate information literacy programs as appropriate.
iv. Critical thinking and lifelong learning – knowledge of concepts and principles of information literacy including the value of integrating critical thinking and lifelong learning into teaching and instruction methodologies.
v. Reference Services – knowledge of the principles and techniques of effective reference services that provides access to relevant and reliable information
vi. Patron Engagement – knowledge of the principles and techniques to effectively interact with users to determine

information need and when that need has been satisfied.

6. Research and Contribution to the profession

All librarians should be knowledgeable of, and commit to ongoing research and professional development through the following:

i. Research and Publication – Contributions through writing, editing, referencing or reviewing of books, articles or reports
ii. Conferences- Contribution through presentations to professional or scholarly association/meetings
iii. Formal study – taken to broaden subject or professional knowledge and may include study for advanced professional and/or related academic qualifications
iv. Teaching – teaching courses in areas of librarianship, archive or other academic disciplines
v. Conference Management- Planning, organizing or conducting professional programs, workshop, seminars or conferences
vi. Professional Associations- active participation in professional associations which may include holding executive office, serving on committees, etc
vii. Active/engagement in community initiatives – especially those associated with their areas of professional or subject expertise
viii. Stay informed – ability to stay abreast of research in a specific area to support a research agenda or to support other work as a librarian within the library
ix. Research models/profiles – knowledge of the fundamentals of qualitative and quantitative research methods including the research process (e.g. question formulation, peer review, etc.)
x. Grant writing – knowledge and pursuit of avenues available for grants to facilitative research work
xi. Information Technology Skills: All librarians should have strong knowledge and capability in the following:
xii. Integrated Library Systems (ILS) – knowledge of basic structure, content and use of an integrated library system
xiii. Emerging web technology – knowledge of major trends in web development including online social networking tools (as of 2010, would include twitter, face book, Myspace, etc.)
xiv. Electronic resources management – knowledge of how digital resources are acquired, managed and accessed
xv. Web Page Development – understanding of principles of web page design and maintenance
xvi. Institutional repositories – understanding the basic structure, content and use of compact institutional repositories
xvii. Learning Management System (LMS/CMS) – Knowledge of the structure and the use of campus LMS/CMS
xviii. Data base management – understanding how data bases are designed and structured for convenient data and/or information retrieval.

Conclusion

The vocation of librarians is evolving due to the ever-changing nature of information and user needs, which presents new challenges and opportunities. Since the quality of the library staff determines the services provided by the library,

librarians must reshape themselves in order to meet the information needs of its Patrons.

The current level of personal and professional competencies differs significantly from the required level, and this difference must be eliminated in order to minimize the disparity.

Librarianship revolves around passion, innovation/creativity, competencies, perseverance, self-reliance and self-motivation. Library activity creates new opportunities.

Information and communication technology (ICT) revolutionized the contemporary society. Finally, Library and information professional become relevant when they key into the dynamics of change to improve their overall skills and knowledge through acquisition of various forms of social, cultural, interpersonal, and ICT competencies and develop mindset to exploit various opportunities in the profession and achieve self-actualization.

Recommendations

i. Library professionals need training to gain competence to make up for the gaps in their knowledge due to the shift from traditional positions like book custodian to newly developing roles like information manager and, more recently, knowledge manager (Khan et al., 2015). In order to teach academic librarians to assist scholarly communication initiatives, there is an urgent need to establish a connection between their internal knowledge and specific events. These events will also improve the librarians' proficiency in managing these kinds of activities (Rodriguez, 2015).

ii. Librarians should acquire specific skills in ICT in order to exploit the market opportunities in the profession so that other professional from computer science, engineering do not step into their core areas of specialization which is information management.

iii. Librarians should develop culture and mindset. Librarianship is all about innovation, creativity, competency, and lot more. LIS professionals should have the mindset to embark on trying to create new things

iv. In order to help professional in the field, chart professional progress and define goals and objectives, professionals should attend workshops and seminars on knowledge and skills acquisition and business acumen required to engage in any library venture.

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UTILIZATION OF METADATA STANDARD FOR DESCRIPTION AND FACILITATION OF ACCESS TO LEGAL INFORMATION RESOURCES IN THE NETWORKED DIGITAL ENVIRONMENT

Dr. Ibrahim Salihu Yusuf, *CLN*
Ahmadu Bello University Distance Learning Centre Librarian
isyusuf@abu.edu.ng or ibrahimsalihuyusuf27@gmail.com
07038515150, 09012633997

Abstract

Creation of metadata is generally done to ensure continuous and steady identification, location and access to legal information resources particularly, in networked digital information environment such as the web. This paper discusses utilization of metadata standards for facilitating access to legal information resources in the network digital environment by examining the traditional and ICT related knowledge and skills of the metadata librarian in describing and creating access. Nature of Law, its information resources and use were highlighted to provide background insight for the paper. The emergence of metadata was traced to the traditional function of nascent library cataloguing up to the contemporary application of MARC, BIBFRAME and Linked Data Frameworks for resource description, interoperability, access and resource sharing. Metadata Standards such as Dublin Core and Mark-up Languages such as, XML among others suitable for describing digital information resources were captured for informative and illustrative purposes. Furthermore, types and importance of metadata in organization and facilitation of access to law information resources were equally explained. The paper concluded by drawing attention to the roles metadata librarian play in enhancing the discovery, access and utilization of legal information resources.

Keywords: Metadata, Utilization, Metadata Standards, Legal Information Resource, Network Digital Environment

Introduction

The development of metadata is set within the context of the history of cataloguing as well as parallel emergence in other disciplines. Cataloguing produced catalogue and metadata created metadata of a given information resource.

A catalogue consists of metadata that can be searched, identified, structured and selected (Guerrini, 2023). Although, metadata and cataloguing are similar (Promerantz, 2015 and Gartner, 2016) scholars have drawn distinctive lines between the two (Zeng and Qin, 2015).

For millennia librarians have been working with metadata. The "metadata" is only some couple of decades old. Though what is addressed as "metadata" has traditionally, just been called "bibliographic elements in the library catalogue." The information in a library catalogue is intended to solve a very specific problem: to help users of the library find materials in the library's collection (Pomerantz, 2015; Pacheco, 2023).

Metadata imply myriad insinuations in application and intention. In application context, Stuart Baker, The then United States NSA (National Security Agency) General Counsel mentioned that "metadata tells you everything about somebody's life" thus, "if you have enough metadata you don't really need content" (Schneier, 2015).

This is simply due to the adequate description of the content it provides in such a manner that it becomes almost sufficient to meet the marginal information need of the information seeker. Metadata is data about data or

information about data which does not reflect usage and description of the subject complexity.

The concept of metadata has risen from several different intellectual traditions and the several usages reflect the intentions of communities that use metadata.

Originally, metadata is referred to as 'meta-data', the fragment 'meta' springs from the Greek which implies higher or superior view of the word it prefixes. It is popularly used in databases and programming professions.

On the contrary, the focus of this paper is on managing metadata to streamline access to legal information and enhance the searchability of Legal resources in the networked digital environment.

The network digital environment is a complex web of interconnected sources of information hosted in local and global networks making access to information an ever increasing activity of metadata search.

The World Wide Web for instance, has revolutionised the digital network environment beyond platform for interaction and collaboration but now incorporates the Internet of things, Artificial intelligence and machine learning, decentralised web (web 3.0) characterised by faster and ubiquitous connectivity and also cloud technology and infrastructure such as SaaS(Software as a Service) and PasS (Platform as a Service).

There is no doubt this environment is a host for pool of virtual and digital information resources where scholars and non-scholars alike contribute, access and utilise literary products hosted on platforms (Internet platforms/databases) where less percentage of those output are freely accessible and large percentage of them being paid for by individuals or subscribed to by institutions for full access such as Lexis-Nexis by Nigerian Law School Library on behalf of its students and staff for the advancement and promotion of legal knowledge and best legal practices.

Consequently, in the spirit of promoting standards and ensuring increased access to legal information resources, academic and law libraries are making frantic effort to reengineer traditional metadata to web based. In this regard, the World Wide Web Consortium (W3C) provides a way forward to building the Semantic Web using the Linked Data principles to implement standards that seems to fit well with the legacy metadata produced and maintained by libraries and other cultural institutions (ALA, 2012).

The metadata provides the information seeker with premium descriptive elements and qualitative approach to search information essentially, in the digital information environment.

Hence, the need for management of metadata for optimum user experience and comfort for navigation of walls of information resources within the digitalised library information environment and the Internet networked information hubs that comprises databases and search engines.

Management of metadata in law libraries is a function of the technical department or the resource processing division, as a contemporary nomenclature. It is done to ensure continuous and steady identification, location and retrieval of information.

According to Kardos (2023) The people who manage metadata are "called metadata librarians or cataloguers and that, metadata librarians and cataloguers support research by creating, storing, enhancing, fixing and maintaining the data that describes all types of library resources" thus, "patrons probably rarely see metadata librarians and cataloguers, but their work is what allows for users to come into a library or search the online catalogue and find something they need. Metadata is the engine that powers the library catalogue".

Building descriptive metadata for law resources is a complex technique which requires a combination of general cataloguing principles, intellectual skills and experience with legal publications (Keyon, 1963). The complexity of organising legal information resources lies in the:
a) nature of law itself
b) nature of legal information resources and
c) nature of use by legal professionals.

John-Okeke (n.d) succinct explanation is handy in this case, particularly, with respect to the constituents and challenges with organising legal information resources as she elaborate the implications in the immediate factors mentioned above in the following ways :

Nature of Law

Law is multidisciplinary in nature. It is all inclusive and very wide. There is virtually law of everything. Hence, it is "impossible to divide the subjects of law into neat watertight compartments, as there is inevitably a great deal of overlapping of different aspects of subjects" (Moys, 2013).

This explains why alphabetical listing by authors was accepted initially by law librarians. Some areas of law can be treated as subjects in their own right, or they can be regarded as aspects of other subjects as the case may be (Nwosu, Tuyo and Anichie, 2014).

This is clearly evident in the Library of Congress Classification Scheme which enumerates all disciplines and subjects linearly. This results in scattering law subjects. For instance, forensic medicine can be treated as subject in medicine or a law subject.

Nature of Legal Information Resources

Kenyon's view, when on a specialist approach of the classification of law is "due to the nature of legal materials and the methods of supplementation by pocket parts, loose-leaf pages, semi-loose-leaf supplements, replacement volumes, advance sheets, and other devices (cited in Nwosu, Tuyo & Anichie, 2014).

The manner of 'editions' in law materials is quite different from that of other disciplines. It is very common in law text to have many editions of the same titles. General schemes such as LC and DDC treat legal publications from subject perspectives.

However, Moys organises law collections by their nature and jurisdiction, that is, primary sources, secondary sources, law reference and law journals. This approach facilitates easy access to law and legal publications of a country needed by the users.

Nature of Use by Legal Professionals

Legal professionals are distinct information users. Hence, conventional arrangement in libraries is inadequate for the classification of law materials. Most classification schemes arrange materials by subject or discipline and sub-arrange them by subordinate topics within the main subject.

In contrast, most users of law libraries search for law materials primarily by jurisdiction and secondarily by subject; only sometimes they approach the subject from the point of view of comparative law (Moys, 2013). Moys rationalises that one requirement for countries with a common law background is that common law materials are shelved together while civil law system should be treated individually. This means that the first consideration when cataloguing law materials is the legal system since the legal practitioners approach the subjects of law by their jurisdiction. (as cited in John-Okeke, n.d).

The Nigerian Law School and Law Faculties in Universities are saddled with the responsibility to graduate competent, professional and ethically trained lawyers prepared not only for the herculean task of

adjudication, counseling, and advocacy but for taking up other responsibilities as may be duly assigned.

Lawyers, by the nature of their profession require core, substantial, reliable, current, verifiable, succinct, comprehensive, easily searched and accessible legal information resources to perform their professional duties provided by the law library. They consume vast amount of information mostly found in books of all forms (print or electronic), databases, journals, technical reports and reviews.

There is no doubt that, law information resources and the law library are synonymous tools for the lawyer. Therefore, the Law School must ensure that her library is equipped with robust and tailor-made resources that are within the reach of staff and students.

Consequently, the law librarian must within knowledge and professionalism revamp and engage in creative activities that will scale up access to law library information resources by users such as, adequate utilization of metadata for processing information resources, building and maintenance of metadata database (OPAC) or print catalogue for increased visibility and access to legal information resources physically and remotely on the web.

Emergence of Metadata

The emergence of metadata creation, concept, techniques, management and use originated with the development of library catalogues which is the mainstay of libraries as far back as the period of the Alexandrian Library in ancient Egypt where library catalogues called "pinakes" was created for over 500,000 scrolls with titles grouped by subjects and genre.

This could be accepted as the initial compilation of metadata (Gartner, 2016). This was followed by the European and Western infusion in library cataloguing which was refined in the ecclesiastical to include metrical catalogue for the cathedral at York and subsequently in the academic library.

According to Hynes, (2018) "By the 13th century, the location of books started to appear in catalogue record and in 16th century the first alphabetical arrangement began to appear". The evolvement of metadata drove through series of advancement and modernization of library catalogues such as later, the French code of 1791 which ushered in the first national cataloguing code with author entry, which used cataloguing cards and rules of accessioning. Also, an important aspect of metadata is the cataloguing rules developed by Sir Anthony Panizzi for the British Museum Library published in 1841.

The advancement grew up to the time when rules for dictionary catalogue was developed by Charlse Cutter in 1876 and the UK arm of the American Library Association produced cataloguing rules in the start of 20th century which later led to the institution of a cooperation that birthed the international cataloguing code followed by the forms of author/title catalogue which were incorporated into the first edition Anglo-American Cataloguing Rule (AACR) in 1967.

This edition was revised in 1978 to capture the initiated International Standard Bibliographic Description (ISBD) by IFLA to give room for the emergence of the ACCR2 which improved the way information resources are described specifying sources of information used to describe publication, the of appearance of date element and the punctuation used to separate the elements.

It was an important development that made catalogues interchangeable and convertible into machine readable form. This brought about the use of computer system for the purpose of cataloguing in the 1960s and a new standard for the data format MARC (Machine Readable Catalogue) developed by an American

computer scientist Henriette Avram working with the library of congress for catalogue records was established (Hynes, 2018 and Tennant, et al. 2021).

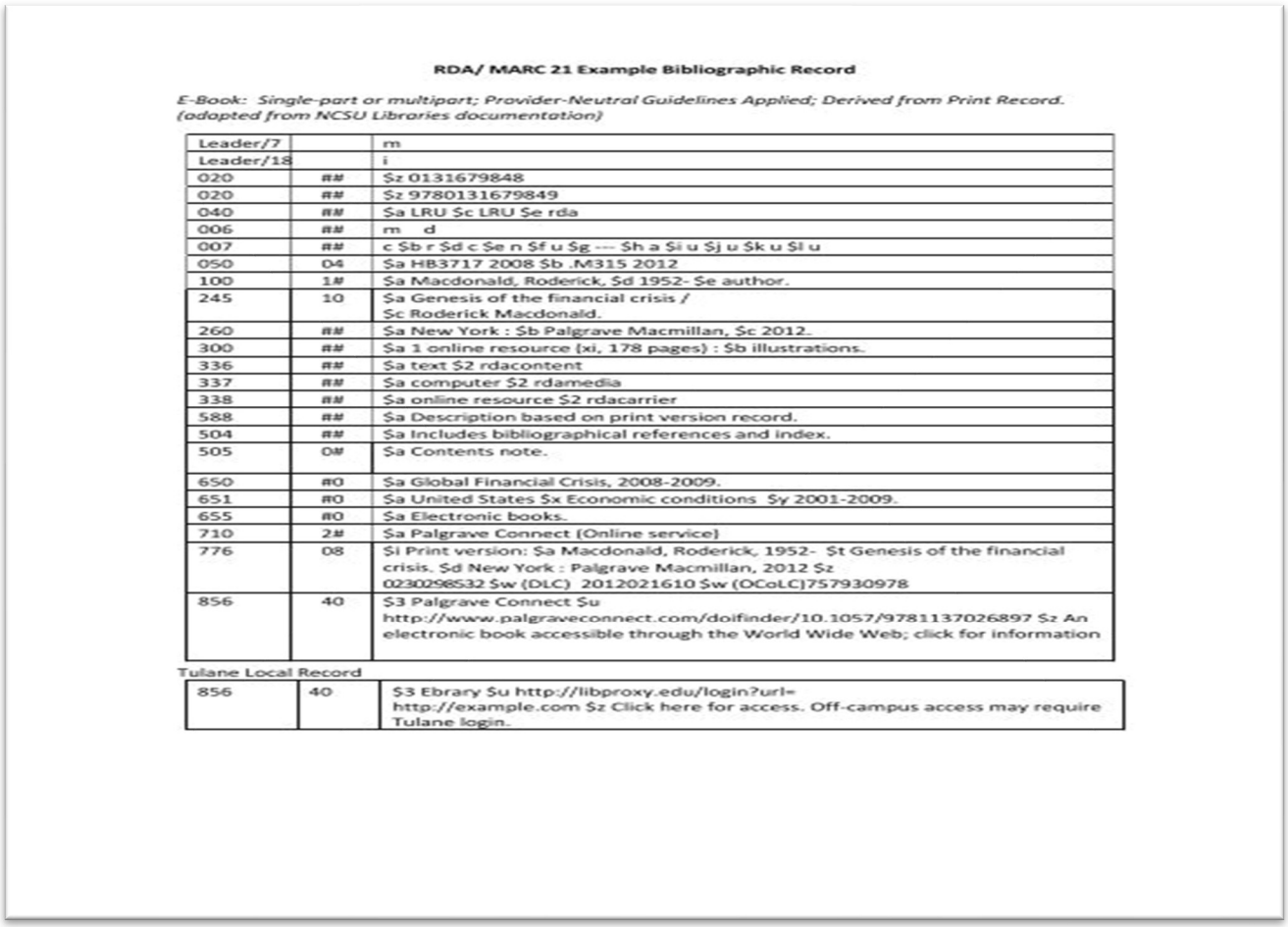
MARC soon had notational versions where countries developed their own kind of MARC such as, USMARC for United States, UKMARC for United Kingdom, NORMARC for Norway and CANMARC for Canada. Despite the fact that these versions were developed to suit their peculiarities, it invariably, hampered international exchange of data. In fact, it was the adoption of MARC 21 that harmonization of national bibliographies was achieved and data sharing became a possibility.

MARC 21 was designed to redefine the original MARC record format for the 21st century and to make it more accessible to the international community. MARC 21 has formats for the following five types of data: Bibliographic Format, Authority Format, Holdings Format, Community Format, and Classification Data Format. Currently MARC 21 has been implemented successfully by The British Library, the European Institutions and the major library institutions in the United States, and Canada. The MARC 21 family of standards now includes formats for authority records, holdings records, classification schedules, and community information, in addition to the format for bibliographic records.

According to Tennant, *et al.* (2021) the future of the MARC formats is a matter of some debate among libraries. On the one hand, the storage formats are quite complex and are based on outdated technology. Therefore, there is no alternative bibliographic format with an equivalent degree of granularity.

The billions of MARC records in tens of thousands of individual libraries (including over 50,000,000 belonging to the OCLC consortium alone) create inertia. The Library of Congress has launched the Bibliographic Framework Initiative (BIBFRAME), which aims at providing a replacement for MARC that provides greater granularity and easier re-use of the data expressed in multiple catalogues.

Figure 1.1 and 1.2 are pictures of MARC 21 and the BIBFRAME model for illustration



RDA/ MARC 21 Example Bibliographic Record

E-Book: Single-part or multipart; Provider-Neutral Guidelines Applied; Derived from Print Record. (adopted from NCSU Libraries documentation)

Leader/7		m
Leader/18		i
020	##	$z 0131679848
020	##	$z 9780131679849
040	##	$a LRU $c LRU $e rda
006	##	m d
007	##	c $b r $d c $e n $f u $g --- $h a $i u $j u $k u $l u
050	04	$a HB3717 2008 $b .M315 2012
100	1#	$a Macdonald, Roderick, $d 1952- $e author.
245	10	$a Genesis of the financial crisis / $c Roderick Macdonald.
260	##	$a New York : $b Palgrave Macmillan, $c 2012.
300	##	$a 1 online resource (xi, 178 pages) : $b illustrations.
336	##	$a text $2 rdacontent
337	##	$a computer $2 rdamedia
338	##	$a online resource $2 rdacarrier
588	##	$a Description based on print version record.
504	##	$a Includes bibliographical references and index.
505	0#	$a Contents note.
650	#0	$a Global Financial Crisis, 2008-2009.
651	#0	$a United States $x Economic conditions $y 2001-2009.
655	#0	$a Electronic books.
710	2#	$a Palgrave Connect (Online service)
776	08	$i Print version: $a Macdonald, Roderick, 1952- $t Genesis of the financial crisis. $d New York : Palgrave Macmillan, 2012 $z 0230298532 $w (DLC) 2012021610 $w (OCoLC)757930978
856	40	$3 Palgrave Connect $u http://www.palgraveconnect.com/doifinder/10.1057/9781137026897 $z An electronic book accessible through the World Wide Web; click for information

Tulane Local Record

856	40	$3 Ebrary $u http://libproxy.edu/login?url=http://example.com $z Click here for access. Off-campus access may require Tulane login.

Figure 1.1: MARC 21 sample of bibliographic record

The BIBFRAME is a data model for bibliographic description. BIBFRAME was designed to replace the MARC standards, and to use linked data principles to make bibliographic data more useful both within and outside the library community (Miller, *et al,* 2012).

BIBFRAME is a tool through that is being utilised for linked data techniques to increase the visibility and usage of library data on the Web but a next-generation ILS must still be created to fully utilize the BIBFRAME tool.

The linked data principle is a set of design principles for sharing machine-readable interlinked data on the Web. Linked Data is one of the core pillars of the Semantic Web, also known as the Web of Data.

When combined with Open Data (data that can be freely used and distributed), it is called Linked Open Data (LOD). A Resource Description Framework (RDF) database such as Ontotext's GraphDB is an example of LOD. It is able to handle huge datasets coming from disparate sources and link them to Open Data, which boosts knowledge discovery and efficient data-driven analytics (Ontotext, 2024).

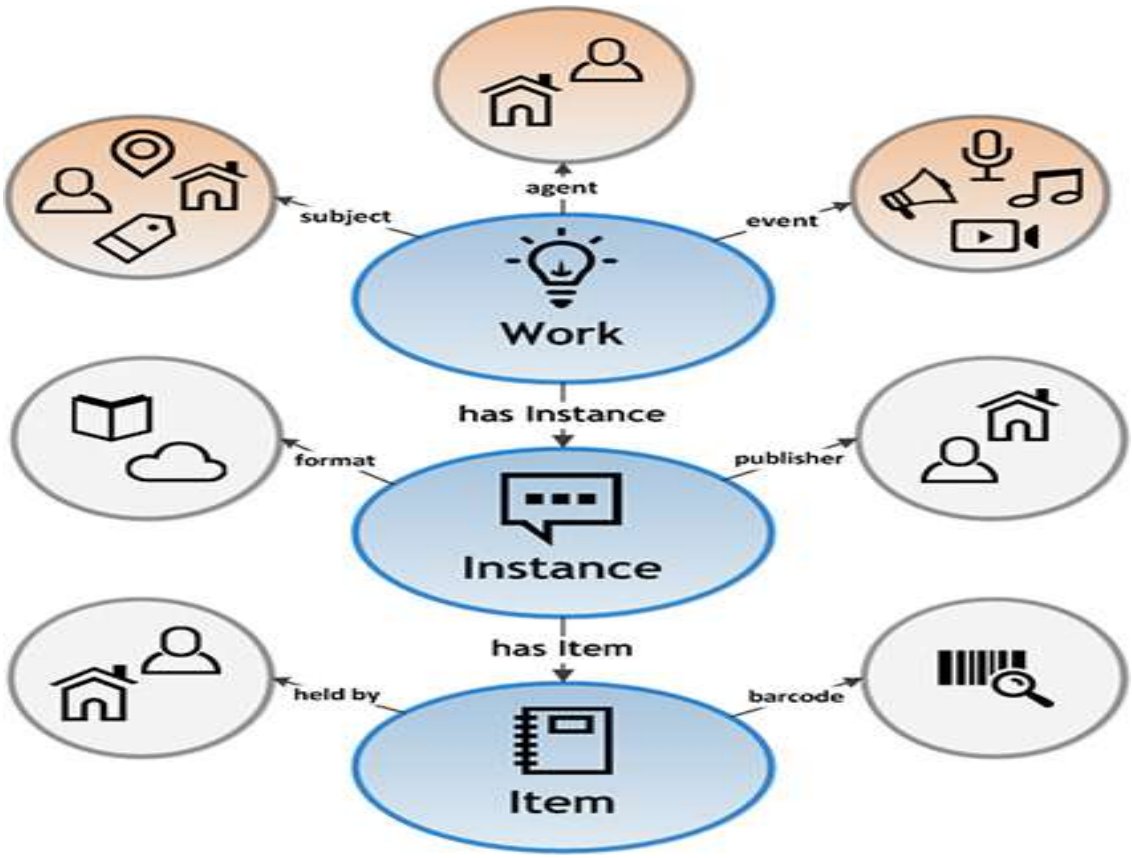


Fig. 1.2: The BIBFRAME 2.0 Model. Library of Congress Network Development and MARC Standards Office

The BIBFRAME organizes this information into three core levels of abstraction: Work, Instance, and Item.

1. **Work.** The highest level of abstraction, a Work, in the BIBFRAME context, reflects the conceptual essence of the catalogued resource: authors, languages, and subjects.
2. **Instance.** A Work may have one or more individual, material embodiments, for example, a particular published form. These are Instances of the Work. An Instance reflects information such as its publisher, place and date of publication, and format.
3. **Item.** An item is an actual copy (physical or electronic) of an Instance. It reflects information such as its location (physical or virtual), shelf mark, and barcode.

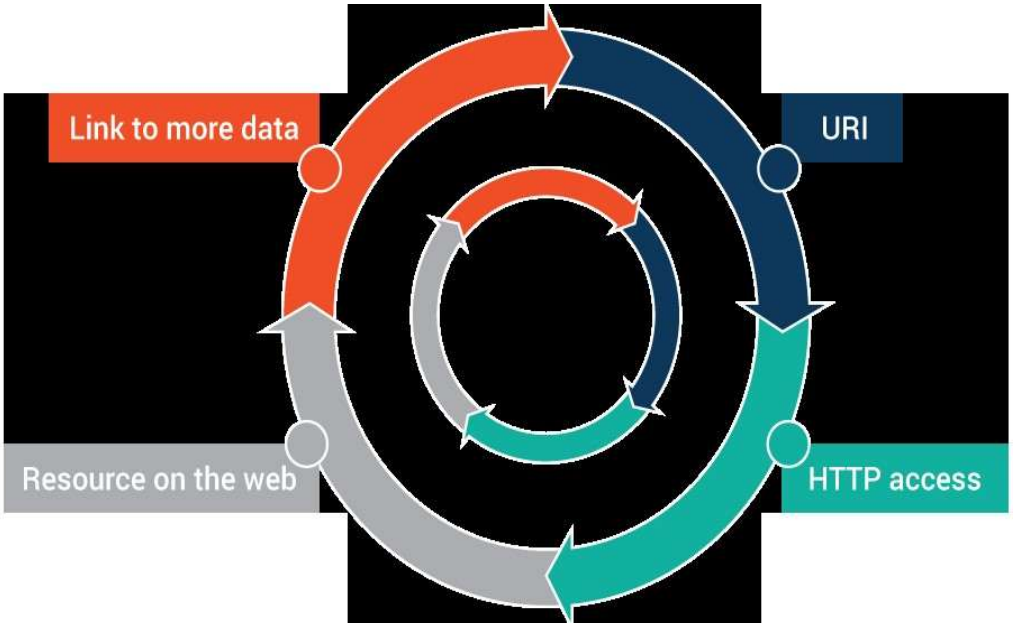


Fig. 1.3: Model of Linked Data

The Semantic Web is about making links between datasets that are understandable not only to humans, but also to machines, and Linked Data provides the best practices for making these links possible. In other words, Linked Data is a set of design principles for sharing machine-readable interlinked data on the Web (Ontotext, 2024).

Human readable metadata range from html meta-tags on web pages to MARC 21 or BIBFRAME records used for exchanging cataloguing data between library management systems.

The metadata can be expressed in a structured language such as XML(Extensible Markup Language) or Resource Description Framework (RDF) and guidelines or schema. For this paper, figure 1.4 is an example of metadata associated with library information resources extracted from the British Library.

Description of Library Metadata Records

Title**: Sapiens: brief history of humankind/Yuval Noah Harari**
Author**: Yuval N.Harari, author**
Subject**: Human Beigns-History**
Dewey:**599.909**
Publication Details: **London Vintage Books, [2015]**
Language: **English**
Identifier: **ISBN 9780099590088 (pkb)**

Fig. 1.4: ***Extract from British Library Main Catalogue***

The field names are highlighted in bold and are equivalent to the data element found in metadata records. Each field is connected to its metadata content which appears alongside the

field name. The same cataloguing information can be displayed on other formats such as MARC 21.

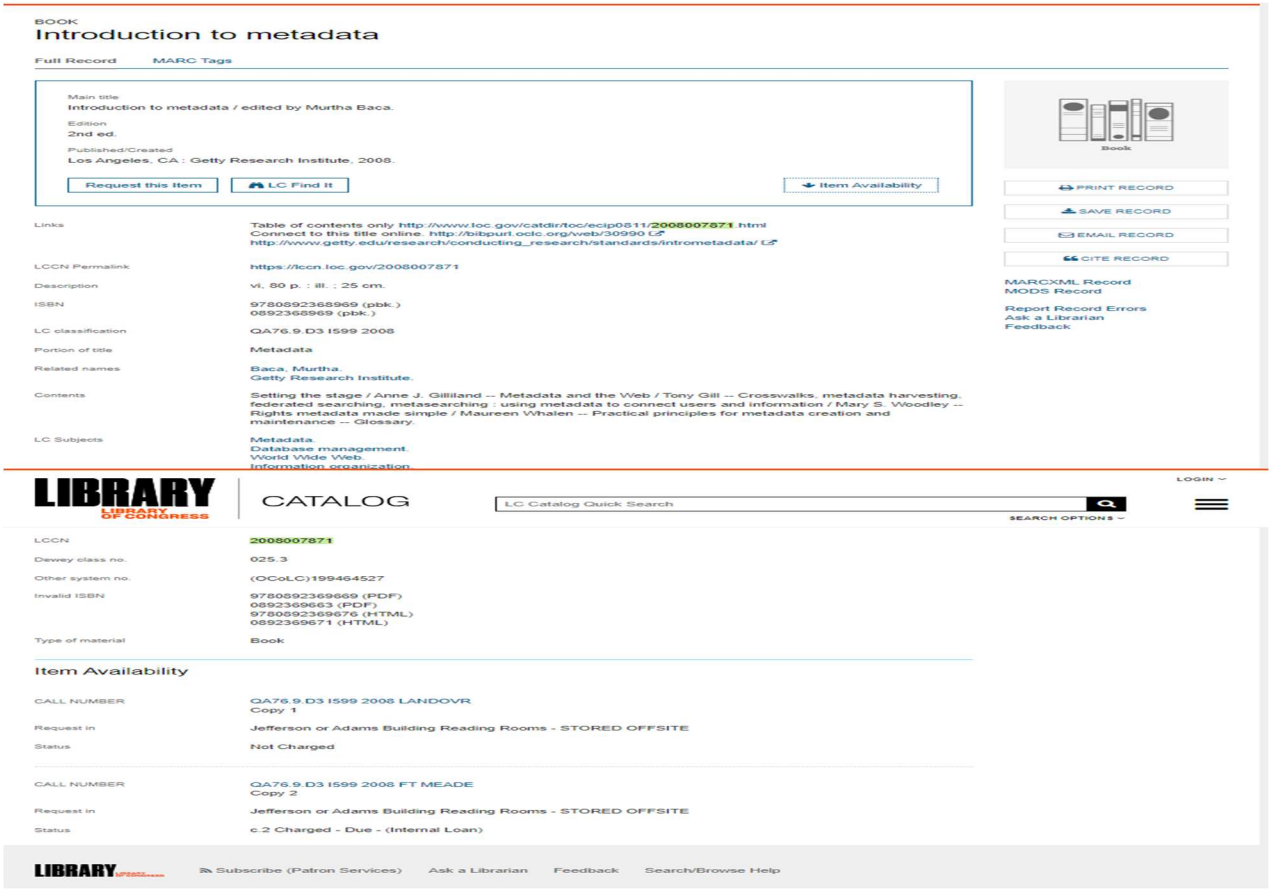


Fig. 1.5: full record of MARC 21 from Library of Congress

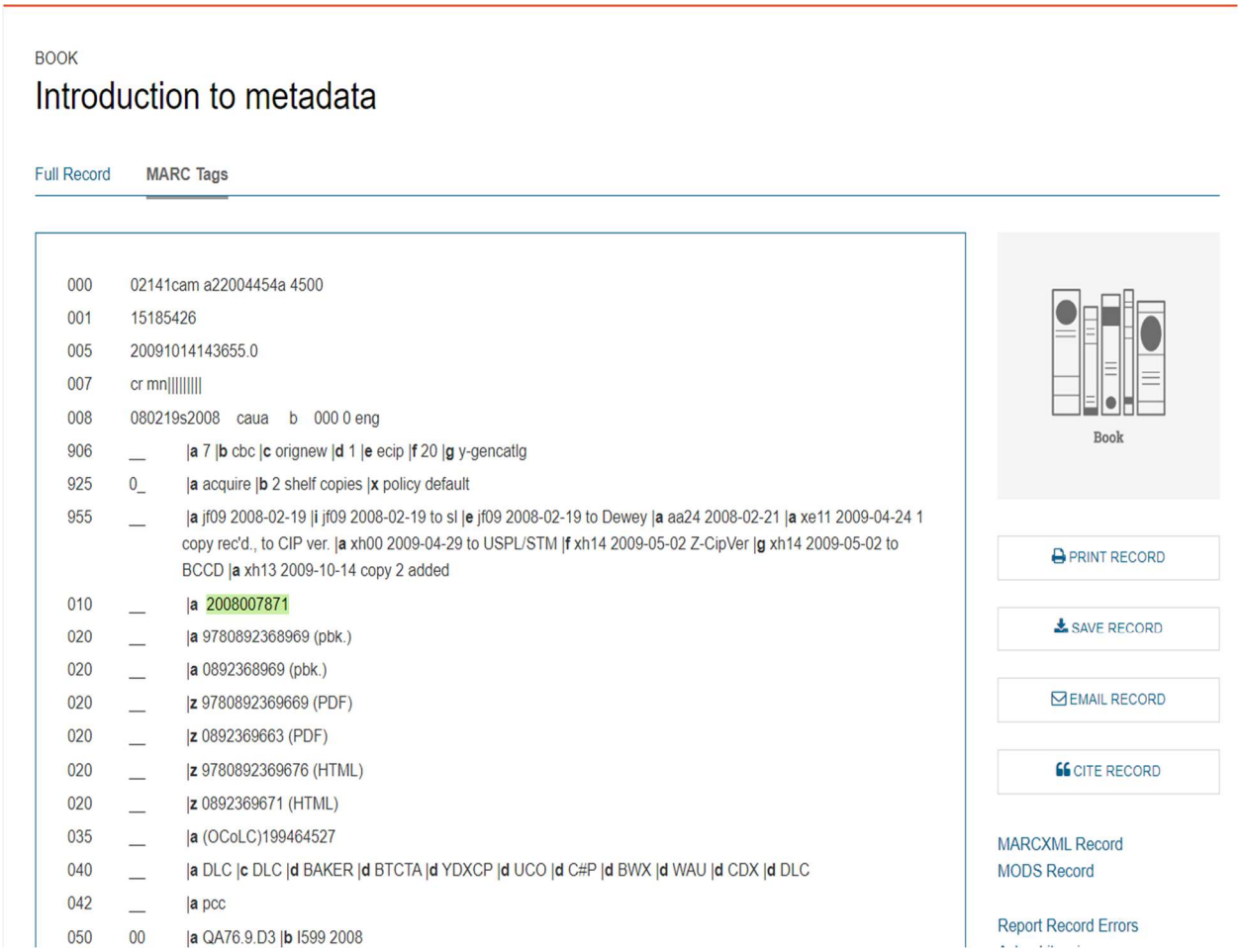


Fig 1.6: MARC metadata tags from library of Congress home page

Metadata Mark-up Languages

One of the appealing aspects of the development of metadata standards has been the convergence of different communities of interests. People recognized the need to work within common frameworks and adopted common languages for describing the data that they handle.

Languages such as Extensible Markup Language (XML) and Resource Description Format (RDF) have played an important role in equipping these communities with a set of tools to describe data and relationships between data elements.

Metadata is used in cataloguing physical and digital information resources and the general concepts are applicable to library catalogue and the embedded metadata in a web page. SGML and XML are the mostly used Document mark-up languages (Haynes, 2018).

The development of mark-up language is an excellent way to express how metadata is expressed and applied in documents.

Metadata are mostly applied in electronic documents that range from web page through to electronic records, text, images and interactive materials. Mark-up languages enables organization to manage large documents that needed to presented in different formats and provides means for defining metadata standards.

They are defined as "computer systems that can automate parts of the document creation and publishing process" Mark-up language containing a combination of text and formatting instructions include: HTML, XML, TEI, and LaTeX.

The table below is an illustration of how a raw text (i.e. the data), the text with formatting instruction (i.e. the mark-up) and the text as it would appear to the reader (i.e. the rendition)

Data (raw text)	Mark-up (text with mark-up instructions)	Rendition (text as it appears to the reader)
This is an example of mark-up text With large, small text as well as bold And italics	this is an example of mark-up text that shows<l>large</l> and <s>small</s>text as well as bold and <i>italics<	This is an example of mark-up text that shows Large and small text as well as **Bold** and *italics*

Source: Hynes, 2018 ***Figure 1.7: illustration of mark-up text***

Standard Generalized Mark-up Language(SGML) is used for describing many web pages and for marking up metadata. This emanated in the 1960s from the work of three IBM researchers, Goldfarb, Mosher and Lorie whose initial letters make up 'GML'. They ascertained that a mark-up language would need three attributes:

a) Common data representation-that allow different systems and applications to process text in the same representation
b) Extensible mark-up-to support all different information to be exchanged
c) Rules for different documents types-formal rules for documents of a particular type used to test their conformance

These attributes provide essential framework for representing clearly identifiable metadata elements. The extensibility of mark-up language allows flexibility in creating metadata tags and document types used to describe the metadata schemas for consistency in their expression in a way that different stylesheets can be applied to the same mark-up text. This implies that the same text can be presented in different ways as printed publication or displayed as a web page viewed with a browser.

The SGML although now withdrawn, was for many years an international standard, ISO 8879 (ISO, 1986) and the basis for mark-up languages. The HTML which is used to encode the content of web pages and extensively used to describe web pages, including the metadata embedded in them as an extension of the SGML. Similarly, the Extensible Mark-up Language (XML) is an open standard that is not controlled by a single vendor; it is a subset of the SGML which presents data in an easy, simple and human readable form. Its specifications are published by World Wide Web Consortium (W3C) and can moreover be used as basis for exchange of data or document between computer systems.

TEI is a specialized markup language widely used in the digital humanities. Although it is not a cataloguing standard its structure facilitates identification and use of structure metadata. Its title statements include title, author and funder information. Other bibliographic information includes edition and publication details. LaTex is equally another specialized markup language developed for scientific and mathematical publications.

Importance of Metadata in Facilitating Access to Legal Information Resources

Effective metadata management is essential for streamlining access to legal information and enhancing the searchability of legal resources in the networked digital environment.

By standardizing metadata formats, enabling granular tagging, facilitating faceted search, promoting interoperability, leveraging linked data, supporting dynamic updating, and incorporating access control mechanisms, legal information systems can deliver a more efficient, comprehensive, and user-friendly experience for legal professionals, researchers, and the general public access to legal information resources is ensured.

The importance of Metadata in accessing legal information resources include but not limited to:

1. Metadata management plays a crucial role in streamlining access to legal information and enhancing the searchability of legal resources in the networked digital environment (Smith, 2018). By implementing standardized metadata formats such as Dublin Core or LegalXML, legal information can be consistently organized and described (Johnson & Doe, 2020). This ensures that legal resources across different platforms and databases can be easily identified and accessed.
2. Granular tagging of legal documents with relevant information such as title, author, date, jurisdiction, keywords, and subject matter enhances searchability by enabling users to perform precise searches based on specific criteria (Brown, 2019). This granular tagging facilitates faceted search, allowing users to narrow down search results by filtering based on various attributes such as date, jurisdiction, document type, and topic (Jones et al., 2021).
3. Metadata management also promotes interoperability between different legal information systems and platforms (Johnson & Doe, 2020). By adhering to common metadata standards and protocols, legal databases and repositories can seamlessly exchange information, making it easier for users to access a wide range of legal resources from diverse sources (Smith, 2018).
4. Leveraging linked data principles, metadata can establish semantic relationships between different legal resources, enabling more sophisticated search and discovery functionalities (Green & White, 2022). Linked data facilitates the exploration of related legal concepts, precedents, and cases, enriching the user's understanding of the legal landscape.
5. Dynamic updating of legal information is enabled by metadata management through versioning and revision tracking capabilities (Brown, 2019). Users can easily identify the latest versions of legal documents and track changes over time, ensuring access to the most up-to-date information (Jones *et al*., 2021).
6. Access control and permissions metadata included in metadata can specify who has access to certain legal resources and under what conditions (Green & White, 2022). This ensures compliance with privacy regulations and confidentiality

requirements while still allowing authorized users to access the information they need.

Furthermore, metadata is not just some "bunch of data" (Bell, 2016) that is collected because it is a duty but rather, it is collected for the purpose it is used for. A wide range of metadata use in library and information profession has been identified as well as. These purposes are put forward by two important models by Day (2001) and Galliland (2016). Day suggested metadata has seven(7) different purposes as follows:

1. Resource Description: identifying and describing the entity (civil Law, international law, e,t,c) that metadata is about
2. Information Retrieval: which is called resource discovery in the context of web resources and the primary focus of the Dublin Core Metadata Initiative
3. Administering and Managing Resources: such as flagging law information resources for update after their period of time have elapsed
4. Intellectual property rights: very crucial in the context of digital platforms such as ecommerce or purchase of law information resources
5. Documenting hardware and software environments: provides contextual information about law information resource that is not applicable to all types of resources
6. Preservation management of digital resources: which is a form of administrative metadata for managing information resources in the Law Library
7. Providing information on context and authenticity: is important in records and archive management. The law librarian should possess the ability to demonstrate the authenticity of information as an essential part of good governance.

Galliland (2016) categorized the purposes of metadata into specific groups and there are some common grounds with that of Day. For instance, Galliland identified metadata for administration (which is equivalent to administration and management in Day's); Description (which encompasses information retrieval or resource discovery); Preservation (as one of the main reasons for metadata); Technical (which correlate to documenting hardware and software in Day's) and use (transactional data in ecommerce system).

Types of Metadata Standards

Metadata standard establishes a common understanding of semantic of data to ensure correct and proper use and interpretation of the data by its owners and users. Figure1.8 shows the types of metadata standards for libraries, library operation and administration.

Type of metadata standard	Definition	Key features	Usage domain	Examples
Descriptive metadata	Provides information about a resource's content for discovery and identification.	Title, abstract, author, keywords for search & retrieval.	Libraries, archives, digital repositories	Dublin Core, MARC
Structural metadata	Reflects compound object assembly, e.g., how pages form chapters.	Displays component order; dictates component relationships.	Digital libraries, multimedia repositories	METS, EAD
Administrative metadata	Manages and administers the resource.	Details resource creation, file type, ownership rights, technical specifics.	Digital archives, institutional repositories	PREMIS, MIX
Rights metadata	Describes licenses and rights of resources.	Defines resource usage terms; accessibility & sharing rights.	Digital publications, multimedia platforms	Creative Commons, ONIX
Preservation metadata	Ensures long-term preservation of digital resources.	Insights into authenticity, provenance; records digital item actions.	Archives, museums	PREMIS, METS
Technical metadata	Details technical resource aspects like file formats.	Information on necessary software/hardware; file specifications.	Digital libraries, media repositories	NISO, AES57
Geospatial metadata	Details about geographic data, such as maps or GIS datasets.	Specifics on coordinate systems, projections; data source info.	Geographic research, environmental studies	FGDC, ISO 19115
Statistical metadata	Informs about production processes of statistical data.	Context about data collection methods; survey instruments info.	Economic research, public policy studies	SDMX, DDI
Semantic metadata	Adds context to data through relationships and semantics.	Defines data element meaning, relationships, logic.	Ontology development, web databases	RDF, OWL
Operational metadata	Relates to runtime and operational aspects during data processing.	Covers execution details, processing tasks, operational statistics.	System operations, data processing systems	PROV-O, BPM

Figure 1.8 types of metadata Source: atlan, 2023

Metadata Standards for Management of Legal Information Resources in Digital Environment

A standard is a document that provides requirements, specifications, guidelines, or characteristics that can be used consistently to ensure that information resource, products, process or library information services are fit their purposes (ISO, 2015).

Documented standards pave the way for future metadata users to understand the convention and intention behind metadata. Operationally, a metadata standard is a set of predefined guidelines that dictate the structure and format of metadata, ensuring consistency in describing and managing data.

Metadata standards are important because they facilitate uniformity and interoperability, enabling effective data management.

Known standards are important tools for controlling the quality of data about legal information resources as they promote greater consistency in description and their analysis which allow for interoperability and metadata exchange between applications and institutions and moreover, aid users to confidently search metadata collections knowing fully where metadata such as, creator (author), date of publication (date(s)), information title, e.t.c. are held.

Metadata can be managed and repurposed for use in new environment and context. The rise of linked data is a substantive illustration of re-use of metadata collections.

However, creation of metadata is usually confronted by the diversity and complexity of sources of data and formats of law information resources. To address this, adopting ubiquitous metadata standards can assist to facilitate data integration, interoperability, and exchange. The most widely used metadata standards include Dublin Core (DC), Data Documentation Initiative (DDI), and Resource Description Framework (RDF).

The Dublin core metadata element is used in this case for illustrative purposes as shown in figure 1.9.

Dublin Core Metadata Element Set

Dublin Core Element	Use	Possible Data Value Standards
Title	A name given to the resource.	
Subject	The topic of the resource.	Library of Congress Subject Headings (LCSH) Faceted Application of Subject Terminology (FAST) Art & Architecture Thesaurus (AAT)
Description	An account of the resource.	
Creator	An entity primarily responsible for making the resource.	Library of Congress Name Authority File (LCNAF) Faceted Application of Subject Terminology (FAST)
Publisher	An entity responsible for making the resource available.	
Contributor	An entity responsible for making contributions to the resource.	Library of Congress Name Authority File (LCNAF) Faceted Application of Subject Terminology (FAST)
Date	A point or period of time associated with an event in the lifecycle of the resource.	W3CDTF
Type	The nature or genre of the resource.	DCMI Type Vocabulary
Format	The file format, physical medium, or dimensions of the resource.	Internet Media Types (MIME) Library of Congress Genre/Form Terms (LCGFT) Thesaurus for Graphical Materials (TGM)
Identifier	An unambiguous reference to the resource within a given context.	
Source	A related resource from which the described resource is derived.	
Language	A language of the resource.	ISO 639
Relation	A related resource.	
Coverage	The spatial or temporal topic of the resource, the spatial applicability of the resource, or the jurisdiction under which the resource is relevant.	Thesaurus of Geographic Names (TGN) Geonames
Rights	Information about rights held in and over the resource.	RightsStatements.org

Figure 1.9: Dublin Core 15 metadata elements for describing information resource

Dublin Core is a simple and flexible standard that defines 15 basic elements for describing any type of resource. DDI is a standard that defines the structure and content of metadata for social and behavioral sciences data. Lastly, RDF is a standard that defines a model and syntax for representing metadata as triples of subject, predicate, and object which can be linked using Semantic Web technologies (LinkedIn Community, 2024). Metadata standards serve as the backbone, ensuring that legal information resources data is not just stored but also understood and utilized effectively.

Other aggregated standard Metadata for library are: Schema; Input/Content Standards and Controlled vocabularies

Schema: these are sets of metadata elements designed for describing a particular type of information resource. The definition or meaning of the elements themselves is known as the semantics of the scheme. The values given to metadata elements are the content (NISO, 2004)

a) Schemas define a set of elements within a context
b) Define rules for machine validation
c) Validation does not find poor inputs such as typos or incorrect information
d) Validation only ensures that required elements are present and that they are presented as outlined in the schema.
e) Provide structure for presentation
f) Discovery interface can be programmed to display metadata elements

Some examples of Library Metadata Schema:

a) DublinCore Metadata Element Set
b) Metadata Encoding and Transmission Standard (METS)
c) Visual Machine Readable Catalogue (MARC) 21
d) Preservation Metadata (PREMIS)
e) Resource Association (VRA) Core
f) European Broadcasting Union (EBU) Core
g) Metadata Object Description Schema (MODS)
h) Encoded Archival Description (EAD)
i) Public Broadcasting (PB) Core
j) Music Encoding Initiative (MEI) Schema
k) Online Information eXchange (ONIX) metadata schema
l) Music Encoding Initiative (MEI) Schema
m) Text Encoding Initiative (TEI) Schema

Input/Content Standards

a) Controls quality of human readable metadata
b) Provides for consistent use of terminology
c) Defines minimum standard for adequate description

Some examples of Library Input Standards:

a) Resource Description and Access (RDA)
b) International Standard Bibliographic Description (ISBD)
c) Anglo American Cataloguing Rules (AACR)
d) Cataloguing Cultural Objects and their Images (CCO)
e) Archives, Personal Papers and Manuscripts (APPM)
f) Describing Archives: a Content Standard (DACS)

Controlled vocabularies: A controlled vocabulary is an organized arrangement of words and phrases used to index content and/or to retrieve content through browsing or searching. It typically includes preferred and variant terms and

has a defined scope or describes a specific domain. (Harpring, 2010).

a) Control vocabulary identify preferred terms among synonyms or comparable topics
b) Define terms and appropriate usage
c) Not mutually exclusive
d) May be created for a specific community or intended for general audience
e) Allow for indexing and display of resources that contain a commonality
f) Most widely known example is subject headings

Examples of Controlled Vocabularies

a) Library of Congress Subject Headings (LCSH)
b) Faceted Application of Subject Terminology (FAST)
c) Sears List of Subject Headings (SEARS)
d) Book Industry Standards and Communications (BISAC) thesauri
e) Getty Thesaurus of Geographic Names (TGN)
f) Thesaurus of Graphic Materials (TGM)
g) Medical Subject Headings (MeSH)
h) Art & Architecture Thesauri (AAT)
i) Rare Book and Special Collection Materials (RMBS) thesauri
j) Library of Congress Name Authority File (LCNAF)
k) Union List of Artist Names (ULAN)

Conclusion

Metadata creation and editing are the processes of generating and modifying metadata records for legal information resources. Library Management Systems (LMS) provide various tools and features to support these processes, such as templates, forms, import and export functions, batch processing, validation, and quality control. LMS may also allow law libraries to create and edit metadata using different formats and schemas, such as MARC, XML, or RDF (Resource Description Framework). LMS may also integrate with external sources of metadata, such as authority files, controlled vocabularies, or linked data services to enhance and enrich the legal information resources metadata records and furthermore to provide mechanisms to ensure the security, privacy, and integrity of legal information resources metadata, such as encryption, authentication, authorization, backup, and recovery.

Way Forward

The function of facilitating access and utilization of metadata is the core responsibility of the law library technical department where acquired legal information resources such as Statutes and Statutory Instruments (Acts, Laws, Bye-Laws, Rules and Regulations etc.); Judicial Decisions (Reported & Unreported Cases); Legal Periodicals (e.g. Law Journals and Magazines);Law Books (Textbooks), Legal Dictionaries and Encyclopedias; Indexes, Digest and Abstracts; Treaties and International Laws; Government Publications (e.g. Government Acts, Bills, Gazettes, Proclamations, Statues, Policies etc.); Non-Legal Materials; Newspapers; Lecture Handouts; Research Reports, Theses & Dissertations; Law Reviews (Umar and Sokari, 2020) that are categorised into primary, secondary and reference sources and other valuable information resources are organised with the aid of a classification scheme (Moy's

scheme) and with a type of library integrated system.

Specifically, some of the ways to utilise metadata for increased searchability and access to legal information resources by law library users include but not limited to:

1. Attraction, recruitment and retention of strong computing skills and passionate technical service librarian who will be dedicated in rendering continuous metadata services that extend beyond the library digitalised information environment
2. Training and retraining of technical services librarians on existing and emerging technologies and techniques in metadata management (such as standards) and on operational knowledge of metadata administration in library and information centre is mandatory

3. Acquisition and culture of timely processing of recommended information resources and upload onto Integrated Library System (ILS) for OPAC (e.g LIB+, KOHA, VTLS, e.t.c) routine should be promoted

4. The metadata librarians and cataloguers should continue to provide research support services by creating, storing, enhancing, fixing and maintaining the data that describes all types of library resources as well as Streamlines processes for metadata cleanup and provides support for metadata transformation and remediation tools such as MarcEdit, e.t.c

5. The metadata librarian should create and continue to update a local metadata database, (much like a bibliographic information or elements) of legal information resources on the web with their links for enhanced search, access and retrieval by the law library users
6. There should be collaboration between the Law Library and its Vendors (for Law databases) on after-sale support services, such as, technical training and user training on the use of their products in the core areas of navigation (e.g Metadata, index, abstract), access and retrieval of information.

7. Researcher: Acting as a researcher, the metadata librarian must maintain a knowledge and familiarity with the new developments in the field. Research is understood to mean systematic investigation and inquiry. The metadata librarian seeks to find information that will speed development of new initiatives within the library. This research often results in new tools for technical services and cataloging staffs.

8. Knowledge sharing: The world of metadata and electronic resource access is a large one, in constant flux as standards are defined, edited, and created, and new ideas on searching and user interfaces are developed. As individual institutions grapple with existing standards and push up against the limits of these standards, libraries have the opportunity to inform, influence, or directly contribute to the metadata schema development.

9. Education: instruction, meshes tightly with the roles above, as it is crucial to ensure that the goals of creating efficient and effective metadata are present in all new library and information technology initiatives. The careful integration of new ideas and practices into those processes that have developed over time in cataloging and description workflows also is necessary. As educator, the

metadata librarian ensures that procedural and workflow changes are accommodated as easily as possible. Metadata librarian positions in the technical services model usually have education or instruction as a specific job duty.

10. Development: development, in this context, means the exploration of options and creation of new or revised approaches. The metadata librarian often must help develop methods to migrate, convert, and enhance metadata, making decisions on how best to balance new possibilities and existing realities. As a developer, the metadata librarian must be aware of the complexities and particulars of metadata schemas so that any needed migration or conversion can be as efficient as possible. The metadata librarian will need to read local documentation (or produce it, based on consulting with collection managers), while keeping in mind knowledge of common standards derived through research and past experience (Chapman, 2007).

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LIBRARY INNOVATION, FINANCIAL ACCOUNTABILITY IN LIBRARY, AND ACADEMIC PERFORMANCE OF TERTIARY INSTITUTIONS IN NIGERIA

Idiodi Evelyn Omoluabi Ph.D[1], Izevbigie, D.P.I. Ph.D[2] & Omoregie, G. Osagie[3]

Department of Educational Administration, University of Benin, Nigeria; taiye.idiodi@uniben.edu[1]
+2348034284211

Department of Entrepreneurship, University of Benin, Nigeria; donpedroyankee@gmail.com[2]
+2348063364545

John Harris Library, University of Benin, Nigeria: godsent.omoregie@uniben.edu[3]

+2348063257788

Abstract

The paper is an empirical interrogation into the relationship between library innovation, financial accountability in library, and academic performance in tertiary institutions in Nigeria. Survey research design was adopted for this research through the administration of likert-scale questionnaire to randomly selected academic staff in Edo State, Lagos State, and Abuja, Nigeria. They constituted the sample size as representative of large number of academicians in Nigeria.The Cochran (1977) formula was used in arriving at a sample size from the large population, while primary data for the study were derived through the means of well-structured questionnaire administered on randomly selected sample respondents. A Cochran sample size, of four hundred and twenty (420) copies of questionnaire were administered, while about 395 copies were retrieved. After sorting for defects and mutilated copies, 384 copies were used for the study. Frequencies, percentages, and inferential statistics were used to analyze the responses. The findings showed that, on average, there was a significant correlation between academic performance at Nigerian tertiary institutions and library innovation, as well as a significant correlation between financial accountability in libraries and academic performance in Nigerian tertiary institutions. Based on these results, it is advised that the appropriate government authorities develop policies as soon as possible to bring about the desired improvement in tertiary education performance, with a focus on strengthened financial accountability in library systems throughout Nigerian tertiary institutions and better library innovation.

Keywords:

Introduction

The phrase academic performance of tertiary institutions could be described as a vague because it lacks a precise meaning. This presupposes that the perspective from which performance is being assessed is the determining factor for appraising such performance.

For instance, while a sole proprietor may be focused on profitability in monetary terms as a basis for measuring performance in the context of private tertiary institutions, the society and employers of labour are likely to be more focused on the output, in terms of value addition capacity of graduates of such institutions.

Similarly, what constitutes performance indicators for non-profit oriented tertiary institutions, could be inconsistent with those of profit-oriented institutions.

These assertions are indicative of the fact that there are likely to be vagaries of attributes which can drive performance indicators of tertiary institutions. Some of these

attributes which drive performance of tertiary institutions could include proper Research and Development (R&D), library innovation, sound financial accountability, good governance policy, and effective leadership.

In the context of accountability, Usman (2016) acknowledges the fact that tertiary institutions are riddled with high problems of accountability, hence the author suggested some factors that could improve this narrative to include good leadership, regular supervision of schools, faculties and department auditing of educational activities, effective communication, and efficient and effective funding which are targeted towards enhanced performance of tertiary institutions.

There are alarming statistics to show low level of research productivity amongst scholars of higher institutions of learning in Nigeria, with the universities haven recorded forty-two months, eighteen days strikes within a 204-month period (1993 – 2009).

In the same vein, the catalystic role of education as a bridge between the rich and poor is gradually being eroded due to managerial crisis and system decay (Akpanuko, 2012).

These crisis and the attendant consequences call for collective action of accountability in other to maximize huge government investment in education to salvage the situation and promote academic productivity.

Knapp and Feldman (2012), posited that accountability in university systems is categorised as internal and external accountability; and the legal and financial accountability, furthermore as scholarly (academic) and moral accountability.

The unique features are likely to have effect on the individual or researcher who make use of the library facilities, particularly in terms of flexibility, efficiency, and effectiveness in sourcing for the required information.

It is imperative to note that public tertiary institutions in Nigeria for the past two decades on the average, have been confronted with challenges such as poor accountability, lack of adequate funding on the part of government, poor state of libraries largely devoid of innovations, stiff competition from proliferation of private tertiary institutions, as well as leadership deficit.

This has led to the erroneous claims by some employers of labour that most of Nigeria's tertiary institutions graduates are not employable, a development that amounts to ethical questions on the performance of tertiary institutions and its associated determinants.

This paper also draws motivation from the fact that there is scarcity of empirical evidence which jointly relates library innovation, and financial accountability with scholarly performance of tertiary institutions of learning in Nigeria.

This empirical paper uses employer of labour perspective to ascertain its broad objective, which is relationship between library innovation, financial accountability, and academic performance of tertiary institutions in Nigeria.

Literature Review

Conceptual Review

Academic Productivity of Tertiary Institutions

Academic publications are designed to disseminate the output of rigorous research and thus assess academic success. Productive manpower is often the output of educated population with the propensity to propel economic growth (Ehighebolo, 2022).

Educated populace are offshoots of tertiary institution as they provide a great percentage of this desired manpower required for a nation's economic growth and development.

Productivity is largely a function of motivation and ability. It could therefore be implied that productivity is rooted in ability and motivation (Udoji, 2006). In terms of functional relationship, Uduji (2006) noted as follows:

Productivity = F(ability) (motivation).

This presupposes that academic productivity could be adjudged as being a function of ability and motivation. Motivation in this context could include accountability, library innovation, adequate funding, and good leadership, as well as competence.

According to the International Labour Organization (ILO, 1999) academic productivity can be gained from capacity building, and suggested that western countries like the United Stated, Europe, Great Britain, as well as some Asian and Latin American Countries have continually adopted productivity measures in appraising their universities system.

Financial Accountability in the University Library

The financial accountability of libraries in public universities is akin to the accountability frameworks of public universities which is a semblance of non-profit making organizations.

They hence render stewardship to government in line with laid down government instructions and financial accounting regulations (Akpanuko, 2012).

According to Fox (2015), the purpose of accountability in the educational system is to address the unspoken social contract that exists between the general public and public educational institutions.

The relevance of financial accountability in tertiary institutions across different countries of the world cannot be overemphasized, thus constitutes an integral aspects of the subject matter surrounding tertiary education (Adetula *et al.* 2020).

In the same vein, Salihu (2015) conducted an investigation in examining the effect of accountability in tertiary institutions and found that most of the institutions were devoid of adequate internal controls particularly in the context of supervision, segregation of duties, personnel controls, and authorization and approval.

Empirical Review

Library Innovation and Academic Productivity of Tertiary Institution

Okiki and Mabawonku (2013) investigated the relationship between information literacy skills and academics research productivity in federal universities in Nigeria.

The research method adopted for this study work was the survey research design. Copies of the questionnaire was administered to a sample size of one thousand and fifty-seven academic staff (1,057) determined with the aid of multi-stage sampling technique after subjecting the questionnaire to relevant validity and reliability tests.

A total of eight hundred and seventy three copies were returned completed, while the responses were analysed with the aid of descriptive statistics.

The analyses' indicated a strong correlation between information literacy (which includes seeking help from peers, going to seminars and workshops, learning by doing, being self-taught, receiving guidance from library staff, and receiving departmental and faculty training) and the productivity output of Nigerian universities.

Additionally, it was revealed that academic staff in Nigerian universities produced research in the form of working papers, conference papers, journal articles, technical reports, and occasional papers than they did in the form of monographs, textbooks, patents, and inventions.

Nwakpa (2015) examined the relationship between insecurity and quality of tertiary education in Nigeria. The study showed

that insecurity had significant impact on the negative growth of tertiary institutions in Nigeria.

Kpolovie and Onoshagbegbe (2017) investigated the research productivity of academic staff of Nigerian universities. Google Scholar h-index and i10-index was used as proxies for research productivity.

Sample were drawn from federal, state, and private universities totalling 1,073 in a proportion of 713; 266; and 94 respectively in the South-South geopolitical zones of Nigeria.

One-way ANOVA and the independent samples t-test were used to analyze the data at the 0.05 level of significance.

The analysis' findings indicate that there are statistically negligible variations in federal, state, and private universities' research productivity: F (2, 1072) = 2.853, P>0.05 for the h-index, and 2.288, P>0.05 for the i10-index. Nevertheless, it was also shown that the nine faculties (areas of specialization) varied statistically significantly in the h-index (F (8, 1064) = 40.666, P < 0.05) and i10-index (F (8, 1064) = 22.321, P < 0.05). Furthermore,

Research productivity was found to be significantly higher in the faculties of agriculture, health science, and natural/applied sciences than it is in the faculties of law, humanities, education, social sciences, management sciences, and engineering.

Additionally, research productivity among female academics was shown to be lower than that of their male counterparts.

Peretomode and Chukwuma (2020) investigated the relationship between manpower development and lecturers' productivity in tertiary institutions in Delta State of Nigeria to select 205 lecturers from a population of 1,021 lecturers as part of an ex-post facto research design.

A proportionate stratified random sampling technique was employed. Multiple regression analysis and the Pearson Product Moment Correlation Coefficient were used to analyze the responses.

The results showed a strong correlation between the productivity of teachers in Nigerian universities and manpower development.

Jacob *et al.* (2021) adopted library-based contextual analyses to x-ray the problems facing academic staff of Nigerian universities. The study made use of information from print and online publications written by reputable organizations, individuals, and bodies.

The studies showed that the issues affecting academic staff in Nigeria include insecurity, large class sizes, low motivation, a bad staff development program, strike action, inadequate infrastructure, low computer literacy, and inadequate financing for research.

Financial Accountability in Library and Academic Productivity of Tertiary Institutions

Ejoh and Ejom (2014) investigated the relationship between financial performance and internal control practices in Nigerian tertiary institutions, with a particular emphasis on Cross River State College of Education in Akamkpa.

Using a survey study methodology, a questionnaire was used to gather data from participants in the chosen sample with the use of a stratified sampling procedure.

Basic percentages, tables, correlation coefficients, and z-scores were utilized to analyze the copies of the questionnaire that were retrieved.

The study's conclusions showed that there was little correlation between Cross River State College of Education's financial performance and its internal control operations.

Akosile and Akinselure (2016) investigated the connection between internal control and financial management of selected universities in Nigeria.

Survey approach was used with administration of one hundred and fifty (150)

copies of likert scale a questionnaire to the purposively sampled universities.

Responses were analyzed with the aid of descriptive statistics which included percentages, chi square as well as frequency tables.

The results of the analysis showed a strong correlation amongst internal control and wise resource management in Nigerian universities.

Shehu (2020) examined the relationship between internal control system and financial accountability of tertiary educational institution in Bauchi State-Nigeria.

A survey research design was chosen, and members of the selected sample were given a questionnaire.

Copies of the responses were then retrieved, and the data was analyzed using STATA 10 software data analysis package, frequency tables, and percentages in addition to non-parametric statistical tests like Chi-square.

Results of the analyses shows that internal audit in Bauchi State is ineffective in relation to financial accountability.

Methodology

The employers of labour both from public, private, and quasi (hybrid) sectors of the Nigeria economy constituted the population of this study, and since the numerical metric of employers of labour in Nigeria is infinite, the study adopted the use of Cochran (1977) formula in arriving at a sample size from the infinite population.

The justification for the use of Cochran (1977) approach is premised on the fact that it is a standard formular for drawing sample size in an infinite population of a given study.

However, given 5% margin of error, the deduced sample size is three hundred and eighty-four (384) respondents.

Hence, primary data for the study were derived through the means of well-structured questionnaire administered on randomly selected sample respondents, who are employers of labour in Edo State, Lagos State, and Abuja, Nigeria.

However, to achieve the Cochran sample size, four hundred and twenty (420) copies of questionnaire were administered, while about 395 copies were retrieved, after sorting for defects and mutilated copies, the sample size of 384 copies were used for the study.

Validity and reliability of research instrument

Survey questionnaire had been subjected to a pilot test to ascertain its reliability and validity. Validity aided the determination as to whether the questions asked to satisfy the purpose as it relates to the study.

In the same vein questionnaire was administered to two colleagues (professor and senior lecturer respectively) in the Faculty of Management Sciences, and Library, University of Benin, Benin City, to help ascertain the face validity.

The necessary corrections which include restructuring of scale, sentence structure and technical terms were made. These adjustments were incorporated in the final draft to make it valid for this study.

A reliability test was also conducted on the questionnaire, which measures the degree or extent of consistency of a research instrument.

Twelve respondents who are not sample population members were selected from among employers of labor in the public, private, and quasi-hybrid sectors of Nigeria.

A test-retest methodology was used for the pilot test. The identical instrument was

given to the same participants again after a two-week break.

The study questionnaire was tested using Cronbach's Alpha. Questions 1 through 5 in the questionnaire sets, which address the connection between library innovation and academic performance of tertiary institutions in Nigeria, had a Cronbach's Alpha coefficient of 0.88, however, the questionnaire sets' questions 6 through 10 that examine the connection between financial accountability and academic achievement in Nigerian tertiary institutions revealed a Cronbach's Alpha coefficient of 0.84.

The reliability coefficients values justify the reliability of our research instruments since the reliability benchmark is achieved when Cronbach's $\alpha > 0.7$.

Method of Data Analyses

The analyses of data in this research were done with the aid of descriptive and inferential statistics, while frequencies, percentages, and inferential statistics were computed for address of the broad and specific objectives. The likert scale questionnaire were used to generate data.

Data analyses and interpretation

The results of frequencies of responses, and percentages computed which is used to address the specific objectives and answer the implied research questions and discussion of findings are presented below:

Library Innovation and Academic Performance of Tertiary Institutions In Nigeria (Q1-Q5)

Library innovation leads to high standard of academic performance of tertiary institutions in Nigeria?

Table 3.1		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	219	57.0	57.0	57.0
	Agree	165	43.0	43.0	100.0
	Neutral	0	0	0	100.0
	Disagree	0	0	0	100.0
	Strongly Disagree	0	0	0	100.0
	Total	384	100.0	100.0	

Source: Researcher Computation using SPSS 25.0

Updates of library research materials improves the quality of university graduates in Nigeria?

Table 3.2		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	270	70.4	70.4	70.4
	Agree	70	18.2	18.2	88.6
	Neutral	44	11.4	11.4	100.0
	Disagree	0	0	0	100.0
	Strongly Disagree	0	0	0	100.0
	Total	384	100.0	100.0	

Source: Researcher Computation using SPSS 25.0

Link or subscription to high impact journals enhances the market value of graduates from Nigeria tertiary institutions?

Table 3.3		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	262	68.2	68.2	68.2
	Agree	122	31.8	31.8	100.0
	Neutral	0	0	0	100.0
	Disagree	0	0	0	100.0
	Strongly Disagree	0	0	0	100.0
	Total	384	100.0	100.0	

Source: Researcher Computation using SPSS 25.0

Access to digital and manual textbooks improves the quality of tertiary institutions in Nigeria?

Table 3.4		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	288	75.0	75.0	75.0
	Agree	88	23.0	23.0	98.0
	Neutral	8	2.0	2.0	100.0
	Disagree	0	0	0	100.0
	Strongly Disagree	0	0	0	100.0
	Total	384	100.0	100.0	

Source: Researcher Computation using SPSS 25.0

Digitalization of library materials and archives exposes tertiary institutions students to quality materials globally, hence enhance academic performance of tertiary institutions in Nigeria?

Table 3.5		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	173	45.0	45.0	45.0
	Agree	211	55.0	55.0	100.0
	Neutral	0	0	0	100.0
	Disagree	0	0	0	100.0
	Strongly Disagree	0	0	0	100.0
	Total	384	100.0	100.0	

Source: Researcher Computation using SPSS 25.0

Findings as revealed in Tables 3.1, 3.2, 3.3, 3.4, and 3.5 respectively are used to address the specific objective of this study which is to examine the relationship between Library innovation and academic performance of tertiary institutions in Nigeria.

The results of the frequency distribution across the different tables shows that the total numbers of respondents who strongly agree, as well as agree on relevant questions relating to to the relative variables of interest are higher with cumulative ratings of 100%, 88.6%, 100%, 98%, & 100% respectively.

Hence, it can be deduced on the average that library innovation has a significant positive relationship between library innovation and academic performance of tertiary institutions in Nigeria.

Financial Accountability in Library and Academic Performance of Tertiary Institutions in Nigeria (Q6-Q10)

Sound internal control systems in library financial activities leads to high academic performance of tertiary institutions in Nigeria?

Table 3.6		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	204	53.0	53.0	53.0
	Agree	161	42.0	42.0	95.0
	Neutral	19	5.0	5.0	100.0
	Disagree	0	0	0	100.0
	Strongly Disagree	0	0	0	100.0
	Total	384	100.0	100.0	

Source: Researcher Computation using SPSS 25.0

Compliance with fundamental accounting principles and guidelines enhances academic performance of tertiary institutions in Nigeria?

Table 3.7		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	173	45.0	45.0	45.0
	Agree	211	55.0	55.0	100.0
	Neutral	0	0	0	100.0
	Disagree	0	0	0	100.0
	Strongly Disagree	0	0	0	100.0
	Total	384	100.0	100.0	

Source: Researcher Computation using SPSS 25.0

Maintenance of Statutory Accountability Framework in Libraries in line with international best practices lead to high academic performance of tertiary institutions in Nigeria?

Table 3.8		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	315	82.0	82.0	82.0
	Agree	42	11.0	11.0	93.0
	Neutral	27	7.0	7.0	100.0
	Disagree	0	0	0	100.0
	Strongly Disagree	0	0	0	100.0
	Total	384	100.0	100.0	

Source: Researcher Computation using SPSS 25.0

Adoption of statutory procurement procedures and guidelines in libraries leads to quality academic performance of tertiary institutions in Nigeria?

Table 3.9		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	262	68.2	68.2	68.2
	Agree	122	31.8	31.8	100.0
	Neutral	0	0	0	100.0
	Disagree	0	0	0	100.0
	Strongly Disagree	0	0	0	100.0
	Total	384	100.0	100.0	

Strict compliance with rules and regulations governing financial accounting in libraries lead to high academic performance of tertiary institutions in Nigeria?

Table 3.10		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	240	62.5	62.5	62.5
	Agree	131	34.0	34.0	96.5
	Neutral	13	3.5	3.5	100.0
	Disagree	0	0	0	100.0
	Strongly Disagree	0	0	0	100.0
	Total	384	100.0	100.0	

Source: Researcher Computation using SPSS 25.0

Findings as revealed in Tables 3.6, 3.7, 3.8, 3.9, and 3.10 respectively are used to address the specific objective of this study which is to find out the nexus between financial accountability and academic performance of tertiary institutions in Nigeria.

The results of the frequency distribution across the different tables shows that the total numbers of respondents who strongly agree, as well as agree on relevant questions relating to relating variables of interests are high with cumulative ratings of 95%, 100%, 93% 100%, & 96.5% respectively.

Hence, it can be deduced on the average that there is a significant and positive relationship between financial accountability in the libraries and academic performance of tertiary institutions in Nigeria.

Summary and Conclusion

The need to improve on the output of higher institutions of learning in Nigeria has continually generated heated debate among different stakeholders, owing to claims and series of complains among employers of labour over the past decades.

The unending industrial unrest between different tertiary institutions-based unions also tends to affirm the narrative that all is not well with the state of these institutions in Nigeria.

In view of these assertions, this study conducted an empirical investigation between library creativity, financial accountability in libraries, and the academic achievement of higher learning institutions in Nigeria in an effort to add to the body of knowledge on the academic performance of postsecondary institutions in Nigeria.

The study's conclusions showed that there was, on the average, a significant correlation between academic performance at Nigeria's tertiary institutions and library innovation, as well as a significant correlation between financial responsibility in libraries and academic performance.

Based on these findings, it can be concluded that with improved investment in critical infrastructure in tertiary institutions in Nigeria, there is likely to be an improvement in the performance of tertiary institutions graduates.

It is therefore recommended that relevant authorities of government should as a matter of urgency craft policies targeted at achieving the desired positive change in tertiary education performance, with particular emphasis on library innovation, and entrenched financial accountability in library systems across tertiary institutions in Nigeria.

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STRATEGIES FOR ENHANCING VISIBILITY AND ACCESSIBILITY OF SCHOLARLY CONTENTS IN ACADEMIC DIGITAL REPOSITORIES: AN OVERVIEW

Dr. Mohammed, Abdullahi Abubakar (CLN)[1], Dr Abdulhamid Gambo Liman (CLN)[2] & Dr Mrs Elameyi Susan Unobe (CLN)[3]

Centre for Energy Research and Training, Ahmadu Bello University, Zaria-Nigeria.
abubakaramohammed@yahoo.com[1]
08037788655

Kashim Ibrahim Library, Ahmadu Bello University Zaria. abdulhamidgambo123@gmail.com [2]
08034956468

Kashim Ibrahim Library, Ahmadu Bello University Zaria seunobe@gmail.com[3]
07039755559

Abstract

Academic digital repositories are critical infrastructure for preserving and disseminating scholarly knowledge in the digital age. This article presents the strategies for enhancing the visibility and accessibility of scholarly content within these repositories. Drawing on recent research and case studies, we examine the proliferation of digital repositories in tandem with the broader trends of digitization and open access in scholarly communication. The importance of visibility and accessibility in scholarly content cannot be overstated, as evidenced by studies demonstrating scholars' preferences for online access and the positive correlation between accessibility and citation impact. However, repositories face numerous challenges, including managing the volume of scholarly content, limited resources, and adherence to evolving standards. To address these challenges, repositories can employ strategies such as metadata optimization, search engine optimization, integration with discovery platforms, social media promotion, and compliance with accessibility standards. Additionally, embracing open access principles and fostering collaboration among stakeholders are crucial for advancing the accessibility and impact of scholarly content. Case studies of successful repositories, such as arXiv and PubMed Central, offer insights into effective practices for enhancing visibility and accessibility. Academic digital repositories can achieve their goals of promoting cooperation and creativity in research as well as easy access to scholarly content by putting these tactics into practice and adopting open access principles.

Keywords: academic digital repositories, visibility, accessibility, open access

Introduction

Academic digital repositories serve as vital conduits for the dissemination and preservation of scholarly knowledge in today's increasingly digital-centric academic landscape.

These repositories, often managed by academic libraries, house a wealth of research outputs, including journal articles, conference papers, theses, datasets, and more.

The significance of these repositories lies not only in their role as custodians of scholarly content but also in their potential to maximize the impact of this content within the academic community and beyond.

In recent years, the proliferation of digital repositories has mirrored the broader trend towards digitization and open access in scholarly communication.

According to a report by the Confederation of Open Access Repositories (COAR), the number of institutional repositories worldwide has been steadily increasing, with

many academic institutions recognizing the importance of providing open access to their research outputs (COAR, 2020). This growth underscores the pivotal role that academic digital repositories play in facilitating access to scholarly knowledge and fostering collaboration and innovation.

The mere existence of digital repositories does not guarantee their effectiveness in disseminating and maximizing the impact of scholarly content. One of the primary challenges faced by academic digital repositories is ensuring the visibility and accessibility of the content they host.

Without adequate visibility, even the most valuable scholarly contributions may go unnoticed by the academic community and wider society. Similarly, limited accessibility can hinder the reach and impact of scholarly content, particularly for audiences with diverse needs and preferences.

In response to these challenges, scholars and practitioners in the field of library and information science have devoted considerable attention to developing strategies for enhancing the visibility and accessibility of content in academic digital repositories.

These strategies encompass a range of approaches, from optimizing metadata and leveraging search engine optimization (SEO) techniques to promoting open access principles and ensuring user-friendly interface design.

Academic digital repositories can thus support intellectual cooperation and innovation while democratizing knowledge access by optimizing the visibility and accessibility of scholarly content.

Enhancing the material in these archives also helps to achieve the more general objectives of solving societal issues, fostering lifelong learning, and advancing research and scholarship.

In light of these considerations, the importance of maximizing the impact of scholarly content in academic digital repositories by enhancing its visibility and accessibility. Drawing on insights from existing literature, best practices, and case studies, the paper will delve into various strategies and approaches that academic libraries can adopt to achieve this goal.

Through a comprehensive examination of these strategies, this paper seeks to provide practical guidance for librarians, repository managers, and other stakeholders involved in the management and operation of academic digital repositories.

Understanding Visibility and Accessibility

In the context of scholarly content, visibility refers to the extent to which research outputs are discoverable and accessible to potential users, including scholars, students, policymakers, and the general public.

Visibility encompasses various factors, such as searchability, indexing, and promotion, that determine the likelihood of content being found and accessed by relevant audiences. In today's digital age, where vast amounts of information are available online, ensuring the visibility of scholarly content is paramount to its impact and dissemination.

Accessibility, on the other hand, refers to the ease with which individuals can access and utilize scholarly content once they have discovered it.

Accessibility encompasses considerations such as format compatibility, user interface design, and compliance with accessibility standards, ensuring that content can be effectively accessed and consumed by users of diverse backgrounds and abilities.

As the digital landscape continues to evolve, ensuring the accessibility of scholarly content is essential for promoting inclusivity, knowledge sharing, and the democratization of information.

The importance of visibility and accessibility in the context of scholarly content cannot be overstated. In a study by Tenopir et

al. (2017), researchers found that scholars overwhelmingly prefer to access research articles online, with the majority citing convenience and accessibility as primary reasons for their preference. Similarly, a survey conducted by Van Noorden et al. (2014) revealed that visibility and accessibility are key factors influencing scholars' decisions on where to publish their research, with open access journals and repositories gaining traction due to their broader reach and impact.

Moreover, the visibility and accessibility of scholarly content are closely linked to its impact and influence within the academic community and beyond.

Research by Haustein et al. (2016) found a positive correlation between the accessibility of scholarly articles and their citation impact, suggesting that increased accessibility leads to greater dissemination and citation of research findings.

Similarly, a meta-analysis by Piwowar et al. (2018) demonstrated that articles available through open access repositories receive more citations on average than those behind paywalls, further highlighting the importance of accessibility in maximizing the reach and impact of scholarly content.

In addition to enhancing scholarly communication and collaboration, maximizing the visibility and accessibility of scholarly content also contributes to the broader goals of promoting transparency, accountability, and societal progress.

Open access initiatives, such as the Budapest Open Access Initiative and the Plan S initiative, advocate for making scholarly content freely accessible to all, recognizing the transformative potential of open access in accelerating scientific discovery and innovation (Budapest Open Access Initiative, 2015; Plan S, 2018).

Academic libraries and digital repositories may play a vital role in promoting equity and inclusivity in the information ecosystem by adopting openness and accessible principles.

Academic digital repositories serve as invaluable resources for preserving and disseminating scholarly knowledge. However, despite their importance, these repositories face a myriad of challenges in ensuring high visibility and accessibility of the content they host.

One significant challenge is the sheer volume of scholarly content being produced, which can make it difficult for repositories to effectively organize and showcase relevant materials.

As noted by West et al. (2017), the exponential growth of scholarly publications presents a daunting challenge for repositories, requiring robust systems for metadata management and content curation to maintain relevance and facilitate discoverability.

Furthermore, academic digital repositories often struggle with limited resources and funding, which can hinder their ability to implement and maintain infrastructure for optimizing visibility and accessibility.

A study by Van de Sompel and Nelson (2017) highlights the financial constraints faced by many academic libraries and repositories, which may impede investments in technologies and staff expertise needed to enhance discoverability and usability of repository content.

Without adequate resources, repositories may find it challenging to keep pace with evolving standards and best practices in digital librarianship, further exacerbating issues related to visibility and accessibility.

Another challenge faced by academic digital repositories is lack of interoperability and standardization across platforms and systems. Incompatibility between repository software, metadata schemas, and indexing services can hinder the seamless discovery and access of content by users.

As observed by Rodríguez-Gairín et al. (2018), the fragmentation of repository infrastructure and metadata practices can lead to inconsistencies in data quality and search functionality, undermining the effectiveness of repositories in supporting scholarly communication and research dissemination.

Moreover, academic digital repositories often encounter legal and copyright-related barriers that restrict the visibility and accessibility of certain types of content.

Copyright agreements, licensing restrictions, and embargoes imposed by publishers may limit the availability of full-text versions of scholarly articles in repositories, complicating efforts to provide open access to research outputs.

A study by Morrison (2017) underscores the complex landscape of copyright compliance and licensing issues facing academic repositories, necessitating careful navigation of legal frameworks to ensure compliance while maximizing the dissemination of scholarly content.

In addition to these technical and legal challenges, academic digital repositories must also contend with issues related to user engagement and awareness.

Despite the wealth of valuable resources housed in repositories, users may struggle to discover relevant content due to inadequate search interfaces or lack of awareness about repository services and functionalities.

As highlighted by Atkinson and Bull (2017), improving user engagement and promoting repository usage requires proactive outreach and marketing efforts, as well as investments in user-centered design and usability testing to ensure an intuitive and rewarding user experience.

Strategies for Enhancing Visibility

Enhancing the visibility of scholarly content within academic digital repositories is crucial for maximizing its impact and facilitating knowledge dissemination. Several strategies can be employed to improve the discoverability and reach of repository contents:

Metadata Optimization: Metadata plays a crucial role in facilitating the discovery of scholarly content within repositories. Repositories can improve the visibility of their material in search results and discovery platforms by making sure that their metadata is complete, correct, and standardized. To enhance indexing and searchability, this entails offering rich descriptive metadata, standardized metadata formats, and regulated vocabularies (Luce et al., 2017).

Search Engine Optimization (SEO) Techniques: Implementing SEO strategies can significantly improve the visibility of repository content in search engine results. This involves optimizing content titles, descriptions, and keywords to align with common search queries used by researchers. Additionally, ensuring that repository platforms are optimized for search engine crawlers can enhance the likelihood of content being indexed and ranked higher in search results (Candela et al., 2019).

Integration with Aggregators and Discovery Platforms: Collaborating with academic aggregators and discovery platforms can broaden the reach of repository content and increase its visibility among relevant audiences. Repositories can reach beyond their own user base and connect with wider scholarly networks by syndicating content to platforms like Google Scholar, BASE, and CORE (Hagedorn et al., 2019). Users can access repository content alongside other scholarly resources thanks to integration with discovery platforms, which increases the content's prominence and accessibility.

Social Media Promotion: Leveraging social media platforms can be an effective way to promote repository content and increase its visibility among targeted audiences. Repositories may engage with users and motivate them to explore and share content within their networks by disseminating links to recent additions, highlighted collections, and

pertinent research discoveries. Repositories can engage with researchers, students, and other stakeholders through platforms like ResearchGate, LinkedIn, and Twitter, which increases the visibility of their work (Crossick et al., 2016).

Cross-Repository Collaboration: Collaborating with other repositories and academic institutions can expand the visibility of repository content and foster cross-disciplinary discovery. Initiatives such as the Confederation of Open Access Repositories (COAR) and SHARE aim to facilitate interoperability and collaboration among repositories, enabling seamless access to content across multiple platforms (Shearer et al., 2019). Repositories can improve the visibility of their holdings and contribute to the scholarly environment by being included in such networks.

Promotion of Open Access Principles: Embracing open access principles and practices can significantly enhance the visibility of repository content by removing barriers to access and enabling broader dissemination. Repositories can advocate for open access policies within their institutions, support the deposit of preprints and postprints, and provide access to full-text versions of research outputs whenever possible. By promoting open access, repositories can increase the visibility and impact of scholarly content while advancing the principles of equity, inclusion, and knowledge sharing (Bauer et al., 2017).

Incorporating these strategies into the management and promotion of academic digital repositories can help enhance the visibility of scholarly content and maximize its impact within the academic community and beyond.

Repositories have the ability to enhance the discoverability and reach of their content by utilizing various strategies such as metadata optimization, search engine optimization, social media promotion, integration with discovery platforms, cross-repository collaboration, and open access principles.

These efforts ultimately aid in the advancement of scholarship and dissemination of knowledge.

Strategies for Enhancing Accessibility

Enhancing the accessibility of scholarly content within academic digital repositories is essential for ensuring that it can be effectively accessed and utilized by users of diverse backgrounds and abilities. Several strategies can be employed to improve the accessibility of repository content. The strategies are as follows:

Open Access Initiatives: Embracing open access principles can significantly enhance the accessibility of repository content by removing barriers to access and enabling broader dissemination. Repositories can advocate for open access policies within their institutions, encourage the deposit of full-text versions of research outputs, and provide mechanisms for users to easily locate and access open access content. Repositories can advance the ideas of equity, inclusiveness, and knowledge sharing while improving the accessibility of scholarly literature by supporting open access (Suber, 2015).

User-Friendly Interface Design: Designing intuitive and accessible user interfaces is critical for ensuring that repository content can be easily navigated and understood by users with diverse needs and preferences. Repositories should prioritize usability testing and incorporate accessibility features such as alt-text for images, keyboard navigation options, and compatibility with screen readers to ensure that content is accessible to individuals with disabilities (Booth et al., 2020). By means of enhancing the usability and accessibility of their interfaces, repositories can improve the overall user experience and facilitate greater engagement with scholarly content.

Interoperability and Compatibility: Ensuring compatibility with different devices and assistive technologies is essential for maximizing the accessibility of repository content. Repositories should adhere to

standards such as the Web Content Accessibility Guidelines (WCAG) and ensure that content is accessible across a range of platforms, including desktop computers, mobile devices, and assistive technologies such as screen readers and magnifiers (World Wide Web Consortium, 2018). Through prioritizing interoperability and compatibility, repositories can ensure that content is accessible to users regardless of their device or assistive technology preferences.

Multimodal Content Delivery: Providing content in multiple formats can enhance the accessibility of repository content for users with diverse learning styles and preferences. Repositories should offer alternative formats such as audio recordings, plain text versions, and multimedia presentations to accommodate different user needs and preferences (Dawson et al., 2019). In offering multimodal content delivery options, repositories can ensure that users can access and engage with content in a format that best suits their individual needs.

Compliance with Accessibility Standards: Ensuring compliance with accessibility standards and regulations is essential for maximizing the accessibility of repository content. Repositories should adhere to relevant accessibility guidelines and regulations, such as the Americans with Disabilities Act (ADA) in the United States or the European Union Web Accessibility Directive, to ensure that content is accessible to users with disabilities (Morris, 2019). By means of prioritizing compliance with accessibility standards, repositories can demonstrate their commitment to accessibility and inclusivity while mitigating legal and reputational risks.

User Education and Training: Providing user education and training resources can empower users to effectively navigate and utilize repository content. Repositories should offer tutorials, guides, and training sessions on accessibility features and best practices to help users maximize their experience with repository content (Anderson et al., 2017).

Through investing in user education and training, repositories can enhance user confidence and competence in accessing and utilizing scholarly content, ultimately improving the accessibility and impact of repository resources. Incorporating these strategies into the management and operation of academic digital repositories can help enhance the accessibility of scholarly content and ensure that it can be effectively accessed and utilized by users of diverse backgrounds and abilities. Via embracing open access initiatives, prioritizing user-friendly interface design, ensuring interoperability and compatibility, providing multimodal content delivery options, complying with accessibility standards, and offering user education and training resources, repositories can foster a more inclusive and accessible scholarly ecosystem.

Case Studies and Examples

Case studies and examples offer valuable insights into successful implementations of strategies for enhancing the visibility and accessibility of scholarly content within academic digital repositories. Through examining real-world experiences and best practices, repository managers and stakeholders can gain practical guidance on effective approaches to maximize the impact of repository content. The following are some case studies and examples that highlight successful initiatives in this area:

arXiv.org: arXiv is a widely used open access repository for preprints in physics, mathematics, computer science, and other fields. With its user-friendly interface, comprehensive search functionality, and extensive collection of scholarly articles, arXiv has become a go-to resource for researchers seeking to access and share early-stage research findings. The success of arXiv demonstrates the importance of providing open access to scholarly content and fostering a collaborative platform for knowledge dissemination (Ginsparg, 2011).

PubMed Central: PubMed Central (PMC) is a free digital repository of full-text biomedical and life sciences journal articles. Operated by the National Institutes of Health (NIH), PMC provides open access to a vast collection of peer-reviewed research articles, ensuring that biomedical research is freely accessible to researchers, healthcare professionals, and the general public worldwide. PMC's commitment to open access and interoperability has made it a valuable resource for advancing biomedical research and improving healthcare outcomes (National Library of Medicine, 2021).

BASE (Bielefeld Academic Search Engine): BASE is one of the world's most comprehensive academic search engines, indexing millions of open access documents from repositories around the globe. Through aggregating content from institutional repositories, subject repositories, and digital libraries, BASE enables users to discover and access a wide range of scholarly resources across disciplines. BASE's integration with academic repositories and commitment to open access principles have contributed to its popularity among researchers and scholars seeking to access high-quality scholarly content (Mutschke et al., 2018).

Digital Commons Network: The Digital Commons Network is a network of institutional repositories hosted on the Digital Commons platform by bepress. It provides a centralized hub for accessing scholarly articles, theses, dissertations, and other research outputs from universities and colleges worldwide. The network's user-friendly interface, robust search functionality, and collaborative features facilitate the discovery and dissemination of scholarly content, enhancing its visibility and accessibility within the academic community and beyond (bepress, n.d.).

CORE (COnnecting REpositories): CORE is a global aggregator of open access research content from repositories and journals worldwide. It provides a single point of access to millions of research papers, enabling users to discover and access scholarly content across disciplines. CORE's innovative technologies, such as text mining and recommender systems, enhance the discoverability and accessibility of repository content, empowering researchers to find relevant literature and advance their research agendas (CORE, n.d.).

Conclusion

The strategies outlined in this paper for enhancing the visibility and accessibility of scholarly content within academic digital repositories are pivotal for maximizing the impact of research outputs and fostering a more inclusive knowledge ecosystem. By means of prioritizing metadata optimization, search engine optimization, integration with discovery platforms, social media promotion, cross-repository collaboration, and open access initiatives, repositories can effectively address the challenges of discoverability and accessibility while amplifying the reach and influence of scholarly content.

Moreover, user-centred approaches such as user-friendly interface design, multimodal content delivery, compliance with accessibility standards, and user education and training are essential for ensuring that repository content can be accessed and utilized by users of diverse backgrounds and abilities.

Through collaborative efforts among stakeholders, including academic libraries, repository managers, publishers, and policymakers, academic digital repositories can continue to evolve as vibrant hubs for scholarly communication and knowledge dissemination, advancing the principles of openness, inclusivity, and collaboration in the digital age.

In embracing these strategies and principles, academic digital repositories have the potential to play a transformative role in shaping the future of scholarly communication. By leveraging emerging technologies, fostering interdisciplinary collaboration, and embracing open access principles, repositories can break down barriers to access and facilitate the free flow of knowledge across disciplinary boundaries and geographical borders.

Moving forward, it is imperative for repositories to remain responsive to evolving user needs and technological advancements, while also upholding ethical standards and promoting diversity, equity, and inclusion in scholarly communication.

In doing so, academic digital repositories can continue to serve as vital catalysts for advancing research, innovation, and social progress in the 21st century and beyond.

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INFORMATION ON DRUG ABUSE AMONG SCIENCE EDUCATION STUDENTS OF AHMADU BELLO UNIVERSITY ZARIA: THE ROLE OF LIBRARIANS

Jimoh Amina Oiza[1] (Ph.D), Ibikunle Gladys Omolola [2](Ph.D) & Garba Ali[3] Karaye (Ph.D)

[1]Kashim Ibrahim Library
[2]University of Lagos Medical Library
[3]Arzman University

Abstract

Illicit circulation of drugs around the world has led to substance abuse among youths at an alarming rate which has both physiological and psychological effects on humans. This paper focuses on the role of librarians as service providers in the provision of information on drug abuse among the Science Education students of Ahmadu Bello University Zaria. To achieve this, three (3) research questions were formulated. However, survey research design was adopted for the study, the total population of registered Science education students was 1009 and the sample size of ten (10%) out of the total population of is 100. The closed ended questionnaire was used, which covered all the research questions. The total response rate derived was 83(83%). Data were analyzed using descriptive statistics and results were presented in tables. The findings revealed a high level of awareness on drug related matter. It was recommended that librarians should intensify awareness and intervention strategies on curbing drug abuse.

Keywords: Information, Drug abuse, Youth, Librarians

Introduction

Drug abuse has since become a matter of grave concern to educational stakeholders, medical practitioners, sociologist, religious leaders, counselors, and parents. It has also become a national and international sensitive challenge that needs urgent attention due to the alarming rate of youth involvement (Abdul-Raheem, 2013).

Drugs according to (Makande, 2017,World Health Organization, 2009) are any chemical substance with effect on human, which may be used to fight infections, illness, minimize pain, fatigue, anxiety or sometimes to achieve a certain level of euphoria to produce reactions which alters psychological functioning.

Drug abuse, therefore, is a deliberate patterned use of substance in amounts or with methods which are harmful to the entire body system. Drug abuse is said to have occurred when chemical substance is used in manners that are not consistent with the prescribed standard, in Nigeria, it was reported recently that about 3million codeine-containing cough preparations are consumed daily in Kano and about 6 million bottles in the Northwest (Ojo, 2018).

Drug use disorder is a common problem affecting about 5% of the world population on average an estimated 8% in the USA. Scholars like (Obiechena & Istguzo, 2016, Adeyeye, 2018 &United Nations Office on Drugs and Crime, 2018) averred that the drugs mainly consumed by youths are beer, cannabis, cocaine, tramadol and hemp to mention but a few.

Youth have been found to have involved themselves in drug abuse which could be as a result of dispositional factors such as peer group influence, coping with academics and availability of drugs (Muhia, 2021, Okafor, 2019 & John et al., 2023).

Substance abuse has been linked to influence from peer group, style of parenting, broken homes, and law enforcement corruption has also boosted the menace (Siro, 2017). Students are the life wire of any university system where knowledge and good morale's are been passed across, due to the ever-alarming involvement of students in drugs the librarians as service providers have a great role to play in the life of the stakeholders who are students.

This can be achieved by the librarian's intervention through outreach and other enriching services discharged to students on campus (Shiva & Shipra, 2019) .

Statement of the Problem

Drug abuse has become a global problem with an alarming increase rate among youth leading to social vices. The level of abuse among youth is alarming with effect on individual, families and society (National Drug and Law Enforcement Agency, 2021).

Illegal drugs are marketable which has become a source of livelihood for many (Stephen, 2016). Moreover, (Tulu & Keshi, 2015) submitted that alcohol and drug abuse among university students is on the increase and have become a problem that government and institutions are facing which seeks urgent attention.

The report on the prevalence rate of drug abuse in Nigeria was said to be 14.4% among persons of 15 and 64 years of age (United Nations Office on Drugs and Crime, 2018).

It may surprise us that a frightening number of people engage in using or abusing drug with the impression of being euphoric, self-confident, and energetic which is especially among the young folk(Olaniyi, 2020).

Due to the readily available drugs over the counter, drug misuse is inevitable. Evidences from previous researches have indicated that the young people are more susceptible to this menace.

It is worth to note that librarians as producers of information services are yet to figure out on the intervention strategies that can address the issue at hand.

This study aims to explore the avenue that librarians can leverage on to provide information as a pivotal role.

Research Questions:

1. What is the level of information on drug abuse among undergraduate students in the Department of Science Education at Ahmadu Bello University Zaria?
2. How can librarians intervene to inform undergraduate students in the Department of Science Education Ahmadu Bello University Zaria on drug abuse?
3. Why have librarians not intervene as information service providers in curbing drug abuse among students of Science Education, Ahmadu Bello University Zaria?
4. Empirical Review of Literatures on Drug Abuse among Students

Evidence from researches have shown that drug abuse is rampant and youth and young adult have been affected irrespective of their ages, gender and educational background.

Kabbash et al., 2022 in a cross-sectional study that investigated the substance use among Kafr El-Sheikh university students in Egypt among university students. The population consisted of 2552 students of the 2018/2019.

It was concluded that men significantly abused substances than women, students were also reported to abuse drugs with a high risk associated with sex and college type.

Scholars like (Aguocha & Nwefoh, 2021) researched the prevalence and correlates of

substance use among undergraduates in developing country using a descriptive cross-sectional study with a population of fifteen thousand undergraduates (15000) and a sample of eight hundred and twenty-five (855) was derived using both multi-stage and proportionate sampling technique.

Data were analyzed using Pearsons's chi-square and logistic regression to test associations between variable. Psychoactive substance use was reported higher among male students.

Ages, religion, place of residence, family and peer use of substance are determinants of psychoactive substance use. From the literature reviewed it is evident that drugs are abused among students which call for intervention, this is where the role of librarians as service providers sets in to help salvage the situation and save our youths from futuristic problems.

Likewise, (Durowade et al., 2021)carried out an investigation on substance use, prevalence, pattern and risk factors among undergraduates' students in Afe Babalola university with a total population of 8500 students and a sample of 421 was derived the researcher recruited 430 students.

Multilevel data analysis was conducted with a clear progression from univariate, bivariate to multivariate. Inferential statistics. The level of significance was set at p value of less than 0.05.

The study concluded that the reason for substance use amongst respondents was attributed to youthful curiosity, peer pressure and media influence. Substance use was significantly associated with age, sex and level of the student in school.

Prevalence of drug abuse amongst university students in Benin City, Nigeria was conducted on eight (800) students using a descriptive survey design and a structured questionnaire for data collection.

Descriptive and inferential statistics using Pearson product moment correlation was used for data analysis. Report showed the higher percentages were male and 46.6% of them have taken substance on non-medical grounds. It was indicated by respondents that drugs were abused as a result of poor student and teacher relationship, faulty parental upbringing and peer group influence.

Results also revealed that is a significant relationship between university environment and drug abuse among UNIBEN students especially those who are resident in the school environment (Adeyemo et al., 2016).

Research in respect to secondary school students, (Idowu et al., 2018)studied the prevalence and factors associated with substance abuse in selected public schools in Ogbomoso in South-West Nigeria using a cross-sectional design and a multi-stage sampling technique, with 218 students used as sample, questionnaire was used to solicit data.

The descriptive and inferential statistics using Chi-square was used at a level of 0.05. The results of the finding showed a significantly high level of unawareness among students because they had not received any formal lectures on the subject.

Causes and Repercussion of Drug Abuse among Youths in Nigeria

The availability of drugs over the counter where sale is not been cautioned as well as the low prices to such drugs have greatly contributed to the abuse of psychoactive substances such as alcohol, tobacco and prescribed drugs as diazepam.

The inadequate knowledge about the drugs and over use of drug is a common factor of drug abuse among student. Stress, physical performance and pleasure, peer group are all causative factor for substance abuse among

students and youths (Muhammad et al., 2015,Jatau et al., 2021 & Mayanchi, 2020).

In Nigeria most social vices have been linked to drug misuse among the youths. Consuming drugs which are chemical substances above its recommended prescriptions have adverse side effects. The abuse of illicit drug has led to destruction of lives and properties which undermine sustainable human development and high rate in crime, youths are most vulnerable on hard drugs and this brings a lot of adverse effects (Obiechena & Istguzo, 2016).

Young people who persistently abuse substances often experience an array of problems, including academic difficulties, health related problems, poor peer relationships and involvement in social vices and lawlessness (Adenugba & Okeshola, 2018, Dankani, 2012).

Furthermore, Mayo Foundation for Medical Education and Research (MFMER, 2023) reported that drug abuse can case impaired driving, that is driving under the influence of any drug affects driving skills, it puts the driver, passengers and others on the road at risk.

Level of Awareness on Drug Abuse

Research study on awareness of drug abuse among teenager by (Sai et al., 2018) revealed that adolescents under study were highly informed and 67% of them have attended programme on the subject matter. In Nigeria 79% of students indicated their awareness on drug abuse related information (Umukoro et al., 2021).

In India a study was conducted on the level of awareness and attitude of adolescent on substance abuse, it was discovered that 50% of them had information on drug abuse and social effect that accompanies it (Divya & Anu, 2018).

Another scholar, (Kiriru, 2018) observed the effect of awareness of substance abuse among university students in Kenya and discovered that the level of awareness led to a drastic drop on substance abuse, implying that the more the awareness level the higher the diminishing level of substance abuse.

In Nigeria, (Abonyi et al., 2022) discovered that students got informed from diverse means such as social media, blogs and press media.

This was in a study that evaluated the awareness, prevalence and factors affecting substance use.

Intervention Strategies for Curbing Drug Abuse

There are numerous strategies that can be explored to curb drug abuse among students. The implementation of preventive measures, awareness campaigns, treatment options, policy formation which would involve the larger community, parents and community leaders (Joseph & Isaac, 2024). (Akpabio, 2003)opined that the most effective measure is the preventive measure, he further suggested curative, rehabilitative, counselling and psychotherapy.

Another way is through the dissemination of information, education, religious counselling, zero tolerance policies were said to be intervention strategies, drug surveillance system should be on campus, community, organizational and individual intervention (Ezeruigbo, 2023,Anene, 2021).

Librarians Intervention Strategy as Service Providers

Young people all over the world are a vital and important segment of the society in which they live. A disciplined, focused and law-abiding youth can create a bright future for any nation. Conversely, a lawless, indulgent and violent youth is a threat to the nation's peace and security (Anasi, 2010).

It is worthy to say that libraries play crucial role in inculcating positive value, attitudes and behaviors in the society. Libraries and librarians

help ensure that access to information is not denied to information seekers.

However, (Anasi, 2010), agrees that information is necessary for people to be liberated from the shackles of ignorance, misconceptions, economic stagnation, social unrest, and political instability.

The role of the library is to acquire process, preserve and disseminate recorded information. In light of this, therefore, the library can help enlighten youths about drug abuse and its implication to nation building. (Okogwu, 2014) opined that libraries provide detailed information about the dangers of drug abuse, it was further buttressed that libraries serve as a place of solace to ease off stresses and strains associated with adolescents without resorting to drug intake.

In the same vein (Udoh et al., 2020) suggested that librarians can intervene by adopting strategies of seminars, workshops, student group discussion, policy formulation, having guidance and counseling unit, media blog as well as television and radio broadcast (Akoja & Adefarasin, 2019) opined the use of communication posters, flyers, seminars as effective methods for intervention.

Udoh. et al., 2020 in his study suggested communication methods librarians may undertake to curb drug abuse among students in Nigerian university such as outreach services using both the conventional method and the technological driven method.

Hindrances on Curbing Drug Abuse

There are so many factors that have contributed to curbing drug abuse and drug related matters on campus. The ineffective of guidance and counseling, poverty rate which increases vulnerability, lack of parental involvement have been opined by (Chidakwa et al., 2023).

Also, Kisaka, 2019 was the opinion that exposure to the media, laxity in the school administration and failure of parents in cooperating with war against drug and substance use are hindrances to curbing abuse.

Research Methodology

The quantitative research method was adopted for the study and the design was survey research. The total population of registered Science Education undergraduate students of Ahmadu Bello University Zaria used for the study was 1009.

The sample size of ten percent (10%) was used from the entire population which was100. The response rate was 83(83%). The instrument for data collection was an adopted and self-structured questionnaire to elicit responses from respondents which were divided into three sections.

The questionnaire was adopted from (Geramian et al., 2014, Poonam & Parajauli, 2022) which was framed to fit into the library context. Collected data were analyzed and interpreted descriptively using frequency and tables.

Findings and Discussions

Information on Drug Abuse Awareness among Science Education Students of Ahmadu Bello University Zaria.

Table 1: Information on Drug Abuse Awareness among Science Education Students

Information on Drug Abuse Awareness	Agree	Disagree	Undecided
Are you aware of drug abuse	71(85)	-	10 (12)
Have you used drugs other than for medical reasons		67 (80)	
Have you abused prescription drugs	26(31)	-	-
Have drug abuse affected your performance and concentration as a student	10(12)	6 (7)	2 (2)
Have you gotten into unlawful activities due to drug influence	17(20)	58(70)	8(9.6)
Do you feel guilty about your engagement in drug abuse	25(30)		44(53)
Have you gone to anyone for help for a drug related problem	-	64(77)	-
Have you been treated for any drug related illness before		68(82)	13 (16)

From the analysis in table 1, the awareness of drug abuse is high with 85%, also 80% of the students disagree to have abused substances, while 82% also noted that they have never been treated for any drug related illness.

This can be supported (Sai et al., 2018, Umukoro et al., 2021 and Abonyi et al., 2022)which were studies carried out in Nigeria which reported high levels of awareness of drug abuse among youths and adolescents.

How Librarians Can Intervene to Inform Undergraduate Students in the Department of Science Education Ahmadu Bello University Zaria on Drug Abuse?

Table 2: Librarian's Intervention to Information on Drug Abuse

How Librarians Can Intervene to Information on Drug Abuse	Frequency	Percentage
Drug awareness campaign	68	82
Counseling	79	95
Library orientation with focus on substance use	65	78
Policy formulation on substance abuse	38	46
Follow up	62	75
Annually observing the international day against drug abuse and illicit trafficking on 26th June	57	69
Having forums on drug and substance misuse	68	82
Mental health talk show in libraries	74	89

Table 2 above indicated that counseling is essential with 95%, followed by mental health talk shows in libraries with 89%, while campaign and forums on drug and substance misuse was 82% respectively. This finding can be supported by the report of (Okogwu, 2014, Udoh et al., 2020, Akoja & Adefarasin, 2019) which were

centered on information, seminars, forums and means of communications such as flyers.

Hindrances of Librarians to Intervention on Drug Abuse as Information Service Providers

Table 3: Hindrances of Librarians to Intervention on Drug Abuse

Hindrances of Librarians to Intervention on Drug Abuse	Frequency	Percentage
Librarians are not trained health professionals and counselors	64	77
Non availability of information resources on drug abuse	52	62
Not having forum discussions on campus	37	45
Media blogs not having information on drug abuse	21	25
Exhibitions have never been done on drug related matters	30	36
Library website have no content on drug related information	16	19
Social media platforms of the library is restricted only to library affairs	43	51

Table 3 above reveals that librarians are not trained professionals and counselors on drug related affairs by 77%, the non-availability of information resources on drug related matter 62% and finally the use of social media platforms only for library related matters 51%.

According to (Chidakwa et al., 2023) who opined that ineffective guidance and counseling have hindered the curbing of drug abuse effectively.

Conclusion

Youths have been seen as the most vulnerable due to their susceptibility to drug addiction and abuse.

It is observed that students are aware of drug abuse, it is now dawn on librarians to intervene to curbing the menace by strategizing to campaign, formulate policies to the parent institutions and have counseling unit in the library, using the library social media platform to educate the students and the community on drug related matters, this is so because the library is a people-oriented institution.

Recommendations

1. The level of awareness should be intensified on campuses and the parent institution should take the issue as a matter of urgency to help youth who are the most vulnerable.
2. It is believed that what people see, hear and partializes has more effects on them and so there is the need for librarians to constantly organize seminars and workshops to educate and enlighten undergraduate students on drug abuse and substance related matters.
3. Intervention strategies should be taken seriously, librarians should campaign and also seek trainings on counseling, the social media platforms of the library should also be used to convey information which relates to drug abuse and substance related matters for proper information and outreach services.

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PRESERVATION AND UTILIZATION OF DIGITAL INFORMATION RESOURCES IN SELECTED FEDERAL UNIVERSITY LIBRARIES IN NORTH WEST, NIGERIA.

Dr. Mohammed, Abdullahi Abubakar (CLN)[1], Aishatu Halilu Umar (CLN)[2] & Dr. Maifata, Nurudeen Muazu (CLN)[3]

Centre for Energy Research and Training, Ahmadu Bello University, Zaria-Nigeria.
abubakaramohammed@yahoo.com[1]

Umar Ibn Ibrahim El-Kanemi College of Education Science &Technology Bama Borno State.
aishamiringagmail.com[2]

Library Department Nasarawa State University, Keffi.
maifata22@gmail.com[3]

Abstract

The study investigated the Preservation and utilization of digital information resources in selected federal university libraries in the North West, Nigeria. The study adopted survey research design and the population of the study consisted of 172 librarians from the three selected federal university libraries in North West, Nigeria. There was no sampling technique involved in the study because the researcher is interested in the total population; therefore total census method was adopted in the study. Questionnaire was used as the research instrument for collecting data in this study. The data collected was analyzed using descriptive statistics such as frequency distribution, percentages, mean and standard deviation. Findings reveal that the types of software used in digital information resources *in the selected federal university libraries are D-space, Integrated libraries software, LOCKSS, Fedora and E-print, D-space, LOCKSS, Fedora and E-print are highly utilized software for digital preservation in the selected federal university libraries and Erective power supply, lack of technical know-how, problem of retrieved of record being downloading, ICT are slow inadequate, Life span of physical media where the information is store and weak Internet connectivity are the Challenge in the preservation and utilization of Digital Information Resources in the selected federal university libraries. The study concluded the selected federal university libraries have adopted a range of sophisticated software systems, including DSpace, Integrated Library Systems (ILS), LOCKSS, Fedora, and EPrints, to support their digitization and digital preservation efforts. Among these, DSpace, LOCKSS, Fedora, and EPrints are highly utilized for their robust capabilities in managing and preserving digital content. However, the effectiveness of these software systems is significantly challenged by several factors such as erratic power supply among others. The study recommended that among others that budgetary allocation to the libraries could be directed with specific aim to boost the provision of digital software, ICT facilities and equipment in the libraries since it is the vogue of research in contemporary time.*

Keywords: Preservation, Utilization, Digital, Information, Resources, University, Libraries

Introduction

University libraries all over the world have been playing significant role in the support of teaching, learning, research and community services. They also strive to provide the necessary information resources in various formats and at the same time ensure access to and retrieval of information resources. These information resources particularly those in electronic format are acquired from within and outside the university. Today libraries are no longer ranked based on physical size nor

sitting capacity nor the number of professional and paraprofessional staff but based on currency of acquired resources and access to digital information resources. The term digital information resources refer to information resources that can be accessed through the Internet-connected devices.

Digital information resources are also the transformation of analog data, including text, images, audio, and video, into digital formats that can be electronically stored, processed, and shared. However, the funds allocated for the acquisition of digital information resources is enormous, therefore implying that care must be taken to ensure that their life span is expanded of prolonged through preservation.

Preservation is an act of maintaining, protecting or keeping something in existence in a condition of stability (Aliyu, 2020). Miller and Rope (2022) opined that preservation include providing suitable storage environment and step-by-step handling of procedures that ensure that the longevity of scanty of information resources. Preservation of information resource is an aspect of the management of information resources in libraries.

Preservation of information resource is no doubt the ultimate in the process of information management, it is the action taken to prevent, stop or slow deterioration of resources. The rationale behind preservation of information resources arise from the fact the library funding is on decline and the available ones cannot carter for the variety of information need of the users (Miller and Rope, 2022).

Printed materials are prone to deterioration through biological, pollutants wear and tear through constant usage and users mishandling also may be by library staff, excessive environmental factors etc. (Dada, 2016). With these shortcomings on the physical well-being of library collection, it is imperative to adopt the modern method of preserving collection which is digitization.

Digitization is the process of converting the printed materials into the digital/electronic format which can later form databases (Saka, 2019). The printed information resources that could undergo digitization include: Serial publication, project thesis/digitization, reports, etc.

The digital collection include: e-Journal, e-thesis, e-books, databases etc, respectively. It is important to acquire collection to libraries, it is also important to preserve those collections in anticipation for users' request. However, library collections are acquired through processes and preserved, as such they are expected to be accessed to meet users' information needs through utilization.

Utilization is the practical and maximum use of library resources identified and acquired for the consumption of clients for the purpose of solving problem or achieving goals. Utilization is a proponent of access is also not measure on physical presence in the library but what must be done to ensure it is access virtually (Mohammed, *et. al* 2021).

The concept of utilization simply means the consultation of information resources on various frequencies (daily, weekly, monthly and quarterly). The contemporary library resources are preserved digitally or in digital format, which means access and utilization depends on the availability of electronic gadgets like computers and other portable digital devices (application), (PDAs).

What is pertinent about utilization according to Ibenne (2020), is that utilization is the primary method by which performance is measured and success determined.

University systems throughout the world are centre of research excellence, they are required to provide solutions to challenges affecting growth and development of the wellbeing of a nation. Therefore, they are required to undertake research, teach and disseminate the findings of undertaken activities for the common good of the society (Ternenge & Kashimana, 2019).

The outputs of these universities are popularly referred to as intellectual properties.

These intellectual outputs are harvested for posterity in the institutional repositories; a major preservation infrastructure. Institutional repository is a digital library system that are uses prescribed software to capture, index and support the chorological arrangement of digital information resources in order to reveal university research by faculty, staff and students for enhancement in knowledge (Abdulkadir 2011).

The adoption of technology for the preservation and enhancing utilization of library services has revolutionized the library and has greatly enhanced information accessibility, store large amount of information and ensure the continuity, function and benefits derived from all acquired information resources per fund invested through time and ease.

This argument was supported by Hussein (2019) who asserted that digital preservation stabilize and protect digital records and publications in forms making as recourse to theft, mutilation and loss observed on print resources.

Statement of the Problem

Libraries generally exist to meet the information needs of clientele. University libraries are not left out in this direction hence, they are charged with the responsibility to providing information resources to support teaching, learning and research activities particularly by lecturers and students.

Libraries existence is not only to select, acquire, process and organized relevant information resources but also to preserve them for the present and future users or in anticipation for users' demand. However, the rise in deterioration of information resources in our university system today can be ascribed to a flaw in our educational institutions, which are not equipped to provide excellent education, particularly in this digital age.

Most library users in Federal University Libraries in North West do not have enough Internet access because not all higher institutions are networked or connected to the Internet, possibly due to the expensive cost or neglect. As a result, the majority of library users are unable to make use of the benefits or rewards offered by digital information resources which result into lower or no learning achievement.

Equally, some Federal University Libraries in North West still continue to rely on print base resources which affect occupational performance of library, library space, access, and state of deterioration of resources.

In the light of the aforementioned issues that the researchers deem it fit to carryout study on Preservation and Utilization of digital information resources in selected federal university libraries in North West, Nigeria.

Research Questions

1. What are the types of software used in Digital information resources in the selected federal university libraries in North West Nigeria?
2. To what extent is the utilization of the chosen software for digital preservation in the selected federal university libraries?
3. What are the challenges in preservation and utilization of digital information resources in the selected Federal University libraries in North West Nigeria?

Methodology

Descriptive survey design was adopted in this study and the total number of population of the study is 172 librarians working in the selected Federal University Libraries namely Ahmadu Bello University Zaria, Bayero University, Kano and Usman Danfodio University, Sokoto. There is no need for sample since the population is manageable.

This is affirmed by Saka (2014) that the whole population can be used if it is

manageable. The instrument used for data collection was structured questionnaire which was designed on a four-point rating scale with a bench mark of 2.50. 172 questionnaire were distributed to the respondents out of which 140 (81.3%)were returned and the data collected were analyzed using descriptive statistics such as frequency distribution, percentages, mean and standard deviation.

Result and Discussion

Question 1: What are the types of Software used in Digital Information Resources in the selected Federal University Libraries?

Table 1: Types of Software used in Digital Information Resources in the selected Federal University Libraries

S/N	Items	SA	A	D	SD	Mean	Std	Decision
1	D-space is the most preferred software in digitization	90(64.2%)	20 (14.3%)	20 (14.3%)	10 (7.1%)	3.36	0.97	Agreed
2	Integrated libraries software are used in digitization	45 (32.1)	12(8.6%)	70 (50%)	13(9.3%)	2.64	1.03	Agreed
3	Lost of copies keep stuff safe (LOCKSS), is used for digitization	80(57.1%)	21(15%)	23(16.4%)	16(11.4%)	3.18	1.01	Agreed
4	Fedora are used for digitization	65(46.4%)	32(22.9%)	12 (8.6%)	31(22.1%)	2.94	1.19	Agreed
5	E-print is the most popular software for digitization	60(42.9)	35 (25%)	15 (10.7%)	30 (21.4%)	2.89	1.16	Agreed
	Weighted mean					**3.00**	**1.07**	**Agreed**

KEY: SA – Strongly Agree 4; **A** – Agree 3; **D** – Disagree 2; **SD** – Strongly Disagree 1

The type of software used in digital information resources in the selected federal university libraries is presented in Table 1.

The first item shows that 90 (64.2%) of the respondents strongly agreed that D-space is the most preferred software in digitization, 20 (14.3%) of the respondents agreed, 20(14.3%) of the respondents disagreed while 10(7.15) of the respondents strongly disagreed.

Therefore, from the mean score of 3.36 which is greater than the bench mark of 2.50 and a standard deviation of 0.97, it shows that D-space is the most preferred software in digitization. The second item shows that 45 (32.1%) of the respondents strongly agreed that Integrated libraries software are used in digitization, 12 (8.6%) of the respondents agreed, 70(50%) of the respondents disagreed while 13 (9.3%) of the respondents strongly disagreed.

Therefore, from the mean score of 2.64 which is greater than the bench mark of 2.50 and a standard deviation of 1.03, it shows that Integrated libraries software are used in digitization.

The third item shows that 80 (57.1%) of the respondents strongly agreed that Lost of Copies Keep Stuff Safe (LOCKSS), is used for digitization, 21 (15%) of the respondents agreed, 23(16.4%) of the respondents disagreed while 16 (11.4%) of the respondents strongly disagreed.

Therefore, from the mean score of 3.18 which is greater than the bench mark of 2.50 and a standard deviation of 1.01, it shows that Lost of copies keep stuff safe (LOCKSS), is used for digitization.

The fourth item shows that 65 (46.4%) of the respondents strongly agreed that Fedora are used for digitization, 32 (22.9%) of the respondents agreed, 12(8.6%) of the respondents disagreed while 31 (22.1%) of the respondents strongly disagreed. Therefore, from the mean score of 2.94 which is greater than the bench mark of 2.50 and a standard deviation of 1.01, it shows that Fedora are used for digitization.

The fifth item shows that 60 (42.9%) of the respondents strongly agreed that E-print is the most popular software for digitization, 35 (25%) of the respondents agreed, 15(10.7%) of the respondents disagreed while 30 (21.4%) of the respondents strongly disagreed.

Therefore, from the mean score of 2.89 which is greater than the bench mark of 2.50 and a standard deviation of 1.16, it shows that E-print is the most popular software for digitization.

The weighted mean of 3.00 is found to be greater than the 2.50 for the bench mark, this implies that types of software used in Digital information resources in the selected federal university libraries are D-space, Integrated libraries software, LOCKSS, Fedora and E-print.

Question 2: Extent of Utilization of the choice Software for Digital Preservation in the Selected Federal University Libraries?

Table 2: Extent of Utilization of the choice Software for Digital Preservation in the selected Federal University Libraries

S/N	Items	HU	U	RU	NU	Mean	Std	Decision
1	D-space software	91 (65%)	19 (13.6%)	15(10.7%)	15(10.7%)	3.33	1.04	Utilized
2	Integrated libraries software	30(21.4%)	10(7.1%)	80(57.1%)	20(14.3%)	2.36	0.97	Not utilized
3	LOCKSS software	85(60.7%)	25(17.9%)	16(11.4%)	14(10%)	3.29	0.94	Utilized
4	Fedora software	75(53.8%)	30(21.4%)	10(7.1%)	25(17.9%)	3.11	1.14	Utilized
5	E-print software	65(46.4%)	30(21.4%)	25(17.9%)	20(14.3%)	3.00	1.10	Utilized
	Weighted mean					3.02	1.04	Utilized

KEY: HU – Highly Utilized 4; **U** – Utilized 3; **RU** – Rarely Utilized 2; **NU**– not Utilized 1

Table 2 presents the extent of utilization of the choice software for digital preservation in the selected Federal University Libraries. The first item shows that 91 (65%) of the respondents accepted that D-space is highly utilized, 19 (13.6%) of the respondents accepted that is utilized, 15 (10.7%) of the respondents accepted that is rarely utilized while 15 (10.7%) of the respondents stated that is not utilized.

Therefore, from the mean score of 3.33 which is greater than the bench mark of 2.50 and a standard deviation of 1.04, it shows that D-space is utilized. The second item shows that 30 (21.4%) of the respondents agreed that Integrated libraries software are highly utilized, 10 (7.1%) of the respondents agreed that is utilized 80 (57.1%) of the respondents agreed that is rarely utilized while 20 (14.3%) of the respondents agreed that is not utilized.

Therefore, from the mean score of 2.36 which is less than the bench mark of 2.50 and a standard deviation of 0.97, it shows that Integrated libraries software are not utilized.

The third item shows that 85 (60.7%) of the respondents accepted hat LOCKSS software is highly utilized, 25 (17.9%) of the respondents agreed that is utilized, 16 (11.4%) of the respondents agreed that is rarely utilized while 14 (10%) of the respondents agreed that is not utilized.

Therefore, from the mean score of 3.29 which is greater than the bench mark of 2.50 and a standard deviation of 0.94, it shows that Lost of copies keep stuff safe (LOCKSS), software is utilized. The fourth item shows that 75 (53.8%) of the respondents agreed that Fedora software is highly utilized, 30 (21.4%) of the respondents agreed that is utilized, 10(7.1%) of the respondents agreed that is rarely utilized while 25 (17.9%) of the respondents agreed that is not utilized.

Therefore, from the mean score of 3.11 which is greater than the bench mark of 2.50 and a standard deviation of 1.14, it shows that Fedora software is utilized.

The fifth item shows that 65 (46.4%) of the respondents agreed that E-print software is highly utilized, 30 (21.4%) of the respondents agreed that is utilized, 25(17.9%) of the respondents agreed that is rarely utilized while 20 (214.3%) of the respondents agreed that is not utilized.

Therefore, from the mean score of 3.00 which is greater than the bench mark of 2.50 and a standard deviation of 1.10, it shows that E-print software is utilized. From the weighted mean of 3.02 which is greater than the 2.50 for the bench mark, implies that D-space, LOCKSS, Fedora and E-print are highly utilized software for digital preservation in the selected Federal University Libraries.

Question 3: Challenge in the Preservation and Utilization of Digital Information Resources in the selected Federal University libraries?

Table 3: Challenge in the Preservation and Utilization of Digital Information Resources in the selected Federal University libraries

S/N	Items	SA	A	D	SD	mean	Std	Decision
1	Erective power supply negatively affects the digitization process	89(63.6%)	26 (18.6%)	10 (7.15%)	15 (10.7%)	3.35	1.01	Agreed
2	Most ICT librarians lack technical know how	75(53.6%)	30(21.4%)	15(10.7%)	20(14.3%)	3.14	1.09	Agreed
3	Problem of retrieved of record being downloading	85(60.7%)	25(17.9%)	16(11.4%)	14(10%)	3.29	0.94	Agreed
4	Some of ICT are slow inadequate	75(53.6%)	30(21.4%)	10(7.1%)	25(17.9%	3.11	1.14	Agreed
5	Life span of physical media where the information is store	65(46.4%)	30(21.4%)	25(17.9%)	20(14.3%)	3.00	1.10	Agreed
6	Week Internet connectivity	55(39.3%)	65(46.45)	10(7.1%)	10(7.1%)			Agreed
						3.18	0.85	
	Weighted mean					3.18	1.02	

KEY: SA – Strongly Agree 4; **A** – Agree 3; **D** – Disagree 2; **SD** – Strongly Disagree 1

The challenge in the Preservation and Utilization of Digital Information Resources in the selected Federal University libraries is presented in Table 3. The first item shows that 89 (63.6%) of the respondents strongly agreed that Erective power supply negatively affects the digitization process, 26 (18.6%) of the respondents agreed, 10(7.15%) of the respondents disagreed while 15 (10.7) of the respondents strongly disagreed.

Therefore, from the mean score of 3.35 which is greater than the bench mark of 2.50 and a standard deviation of 0.97, it shows that Erective power supply negatively affects the digitization process. The second item shows that 75 (53.6%) of the respondents strongly agreed that most ICT librarians lack technical know how, 30 (21.4%) of the respondents agreed, 15(10.7%) of the respondents disagreed while 20 (14.3%) of the respondents strongly disagreed.

Therefore, from the mean score of 31.4 which is greater than the bench mark of 2.50 and a standard deviation of 1.09, it shows that most ICT librarians lack technical Knowhow.

The third item shows that 85(60.7%) of the respondents strongly agreed on problem of retrieved of record being downloading, 25 (17.9%) of the respondents agreed, 16 (11.4%) of the respondents disagreed while 14 (10%) of the respondents strongly disagreed.

Therefore, from the mean score of 3.29 which is greater than the bench mark of 2.50 and a standard deviation of 1.01, it shows that problem of retrieved of record being downloading is a challenge.

The fourth item shows that 75 (53.6%) of the respondents strongly agreed that some of ICT are slow inadequate, 30 (21.4%) of the respondents agreed, 10 (7.1%) of the

respondents disagreed while 25 (17.9%) of the respondents strongly disagreed. .

Therefore, from the mean score of 3.11 which is greater than the bench mark of 2.50 and a standard deviation of 1.14, it shows that Some of ICT are slow inadequate.

The fifth item shows that 65 (46.4%) of the respondents strongly agreed on Life span of physical media where the information is store, 30 (21.4%) of the respondents agreed, 25(17.9%) of the respondents disagreed while 20 (14.3%) of the respondents strongly disagreed.

Therefore, from the mean score of 3.00 which is greater than the bench mark of 2.50 and a standard deviation of 1.10, it shows that life span of physical media where the information is store is a challenge.

The six item shows that 55 (39.3%) of the respondents strongly agreed on Weak Internet connectivity, 65 (46.45%) of the respondents agreed, 10 (7.1%) of the respondents disagreed while 10(7.1%) of the respondents strongly disagreed.

Therefore, from the mean score of 3.18 which is greater than the bench mark of 2.50 and a standard deviation of 0.85, it shows that weak Internet connectivity is a challenge.

From the weighted mean of 3.18 which is greater than the 2.50 for the bench mark, this implies that Erective power supply, lack of technical know how, problem of retrieved of record being downloading, ICT are slow inadequate, Life span of physical media where the information is store and weak Internet connectivity are the Challenge in the Preservation and Utilization of Digital Information Resources in the selected Federal University libraries.

Discussion

The result from research question one revealed that the types of software used in digital information resources in the selected federal university libraries are D-space, Integrated libraries software, LOCKSS, Fedora and E-print. This findings is in line with the findings of Saka (2019) who reported that DSpace software that is being used in the digitization of theses in Nigeria University libraries.

The finding is also in line with Alemneh, D. G., & Hastings, S. K. (2017) who reported that the digitization of library resources in federal universities is crucial for preserving and providing easy access to academic materials. Various types of software are used in this process, each serving specific functions to ensure the efficient management and dissemination of digital resources.

The result from research question two revealed that D-space, LOCKSS, Fedora and E-print are highly utilized software for digital preservation in the selected federal university libraries. The findings agreed with the findings of Mohammed et al (2021) who reported that D-space, LOCKSS, Fedora and E-print as the most utilized software for digital preservation and conservation practice in Federal Universities in North-West Nigeria.

This findings is also related to the findings of Tansley and Smith (2021) who highlighted that DSpace, LOCKSS, Fedora, and EPrints are highly utilized software for digital preservation in selected federal university libraries.

Each of these software packages plays a crucial role in ensuring the long-term preservation and accessibility of digital content, supporting various functions and features tailored to the needs of academic libraries.

The result from research question three revealed that erective power supply, lack of technical know-how, problem of retrieved of record being downloading, ICT are slow inadequate, Life span of physical media where the information is store and weak Internet connectivity are the Challenge in the Preservation and Utilization of Digital Information Resources in the selected Federal University libraries.

The findings here agrees with Nnadozie et al (2017) who posited that if an organization lacks unstable power, poor network connectivity, inadequate ICT facilities, lack adequate finance, or does not use its finance efficiently and effectively, it will fail to meet its objectives.

The finding is in line with Gbaje (2017) who found that challenges such as erratic power supply, lack of technical know-how, problems with record retrieval during downloading, inadequate ICT infrastructure, the limited lifespan of physical media, and weak internet connectivity are significant barriers to the preservation and utilization of digital information resources in selected federal university libraries.

Conclusion

From the analysis of the data of this study, the researcher concludes that the selected federal university libraries have adopted a range of sophisticated software systems, including DSpace, Integrated Library Systems (ILS), LOCKSS, Fedora, and EPrints, to support their digitization and digital preservation efforts. Among these, DSpace, LOCKSS, Fedora, and EPrints are highly utilized for their robust capabilities in managing and preserving digital content.

However, the effectiveness of these software systems is significantly challenged by several factors. These include erratic power supply, lack of technical know-how among library staff, problems with retrieving records during downloading, inadequate ICT infrastructure, the limited lifespan of physical storage media, and weak internet connectivity.

Recommendations

Based on the findings from the analysed of the data, the researcher would want to recommend as follows:

1. Budgetary allocation to the libraries could be directed with specific aim to boost the provision of subscribed and unsubscribed software and ICT facilities in the libraries since it is the vogue of research in contemporary time.

2. There is a need for adequate provision of digital software and ICT facilities in the selected Federal University libraries to enhance utilization of digital information resources

3. Provision of power supply should be provided and staff training on digitisation of procedures and software technology should be given priority in the selected Federal University libraries. Where budget allocation is insufficient, direct capital intervention by government could help reduce the need for digital software and ICT acquisition in the libraries.

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CLIMATE CHANGE MISINFORMATION & LITERACY: PERCEPTION OF SELECTED UNDERGRADUATE STUDENTS IN A UNIVERSITY OF TECHNOLOGY

Salau Sadiat Adetoro[1], Obaje Alfred Michael[2] & Isah Yahaya Abdullahi[3]
University Library Services
Federal University of Technology, Minna[1,2,3]
adetoro@futminna.edu.ng, obaje012@gmail.com, yahaya.isah@futminna.edu.ng

Abstract

The paper presented the findings about the perceptions of selected undergraduate students on climate change misinformation and literacy. Empirical data was collected using an exploratory approach. The perception of 60 selected undergraduates on climate change misinformation and the use of Open Education Resources (OERs) to curb climate misinformation. To reduce biases, students selected for data collection were not in disciplines related to environmental sciences, geography or climate science. The data collected indicated that the students understand that climate change exists, although over half of the respondents were not sure if they had been misinformed about climate change from their most used sources of climate change information. The study concluded that climate change awareness is rapidly gaining ground as the perception about climate change and its consequences is no longer in doubt among the students. The study recommended that librarians in the open access space play a key role by increasing accessibility to diverse high quality OERs that would provide accurate information on climate change. Librarians can also use social media platforms and other digital tools to enhance students' critical thinking and media literacy skills thereby enabling them to discern credible information about climate change from misinformation.

Keywords: Climate Change Misinformation, Climate literacy, Climate Education, Nigeria

Introduction

Climate change is the thirteenth (13th) goal of the Sustainable Development Goals (SDG). It is also one of the SDGs that is integrally connected to all 16 goals of the SDGs (United Nations, 2023).

It is arguably the most pressing, devastating and large-scale crisis in modern history, due to the increased use of fossil fuels, which is heating up the temperature of the earth (Kornfeind, 2022). Ironically, the effects of climate change are felt more strongly in Africa than in the countries that have made the biggest contributions, despite the negligible carbon footprints of the continent.

Target 13.3 of the Sustainable Development Goal 13 is on the improvement of education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

The International Federation of Library Associations and Institutions (IFLA) utilises the SDGs as a basis for guiding initiatives aimed at counteracting climate change; key goals informing librarians' sustainability projects include affordable and clean energy, clean water and sanitation, sustainable communities, climate action to mention but a few (Kornfeind, 2022).

Thus, libraries and librarians as knowledge gatekeepers are saddled with the responsibility of upholding and advancing the sustainable development principles due to their role of knowledge and literacy acquisition and dissemination.

According to Aytac (2022), climate change literacy is the ability to find, understand, and use information and services to make decisions about the environment including climate change. Thus, to achieve the target indicators of SDG 13, it is pertinent for

individuals and communities to be literate about climate change. Interestingly, globally and even in Africa, there are recommendations about the inclusion of climate literacy in education curriculum (Eze at. al. 2022, Abdullah, 2023).

Furthermore, the paradigm shift in education and lifelong learning through digital information resources and tools can be leveraged by librarians to achieve climate literacy.

One of these tools are Massive Open Online Courses (MOOCs). MOOCs are Open Education Resources (OERs) which have become ubiquitous due to Information and Communication Technologies.

According to Cvetkovic (2021), MOOCs are free online courses that provides affordable and flexible way to learn new skills for career development, career change, college preparation, supplementary learning, lifelong learning, corporate e-Learning and training.

However, literature has largely focused on leveraging MOOCs for improved access to higher education based on the challenges of access and enrolments in Nigeria higher education system. (Abdullahi et al 2020).

There is a dearth of literature on the use of MOOCs outside higher education for lifelong learning or to curb misinformation and disinformation on contemporary issues such as climate change.

Thus, the researchers explored the perception of selected undergraduates at the Federal University of Technology, Minna Nigeria on their perception of climate change and open education resources to achieve the following objectives:

1. Assess the perception of climate change

2. Assess the perception of the use of Open Education Resources (OER) to curb climate change misinformation

Climate Misinformation in Nigeria

Climate denial and misinformation are challenges in Nigeria. it was evident during the devastating floods in 2022.These challenges are compounded by Africa's low carbon footprint and other factors linked to the effects of climate change including insecurity, poverty and government negligence.

However, the effects of climate change across geographical regions in the country are becoming increasingly devastating, from the desertification in the north to the devastating floods in the middle belt and southern areas, to the haze caused by soot in oil-producing areas.

Nigeria has a low level of climate change education and awareness, with the majority of the population understanding its effects outside of their immediate surroundings (Odjugo, 2013).

However, Nigeria is among the nations' most likely to be negatively impacted by climate change, with concerns including flooding, a lack of water, an increase in illness, and economic decline (Abdulhamid, 2011).

Thus, access to information and communication are essential for raising public knowledge of the problems posed by climate change and strategies for adaptation (Akudo, & Kizito 2023).

Consequently, there has been efforts to improve the literacy level of the populace using education and media. For instance, in Kano, Nigeria, people's awareness of the problem has improved as a result of media coverage and depictions of climate change (Balarabe & Hamza, 2020).

With the information environment polluted by misinformation to deny or delay climate action, there is a need for a robust knowledge commons with free access to climate information to grow the capacity of non-specialist audiences.

In general, while there is some level of awareness and understanding of climate

change in Nigeria, there is a need for more comprehensive education and communication strategies to address climate misinformation and promote climate action.

Methodology

An exploratory approach was used to assess the perception of 60 selected undergraduates on climate change misinformation and the use of OERs in curbing its misinformation.

A quantitative survey was carried out and data was collected from 30 undergraduate intern students of a research group (Advanced Engineering Innovation Research Group) in Federal University of Technology, Minna.

The remaining 30 questionnaires were distributed to students that visited the library on the 4th of October 2023.

The questionnaire had questions on the perception of undergraduates on climate change misinformation and the use of Open Education Resources (OER) to curb climate change misinformation.

Findings

Perception of Climate Change

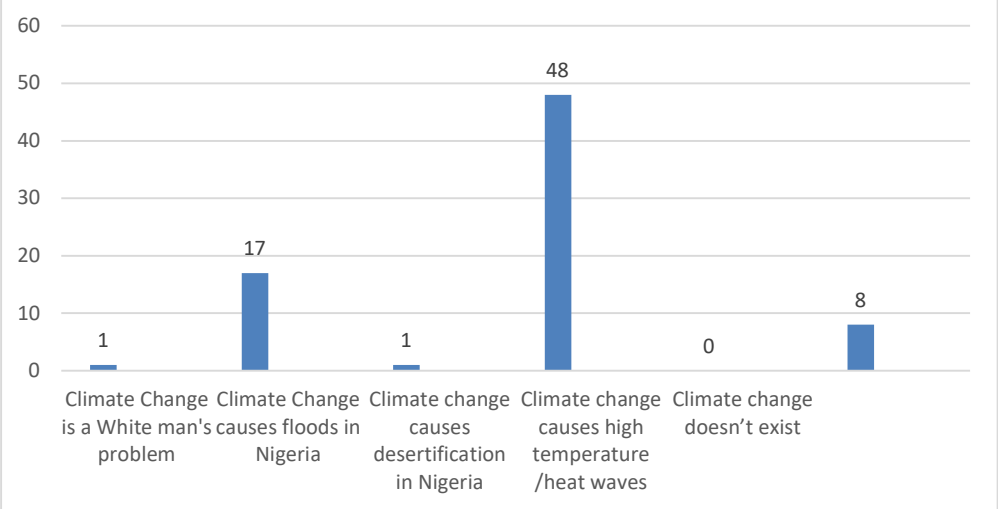

Figure 1: Perception of Climate Change (n=60)

80% of the respondents perceived climate change as a phenomenon that causes high temperature, while 28.3% believes climate change causes floods. Interestingly, none of the respondents stated that climate change doesn't exist.

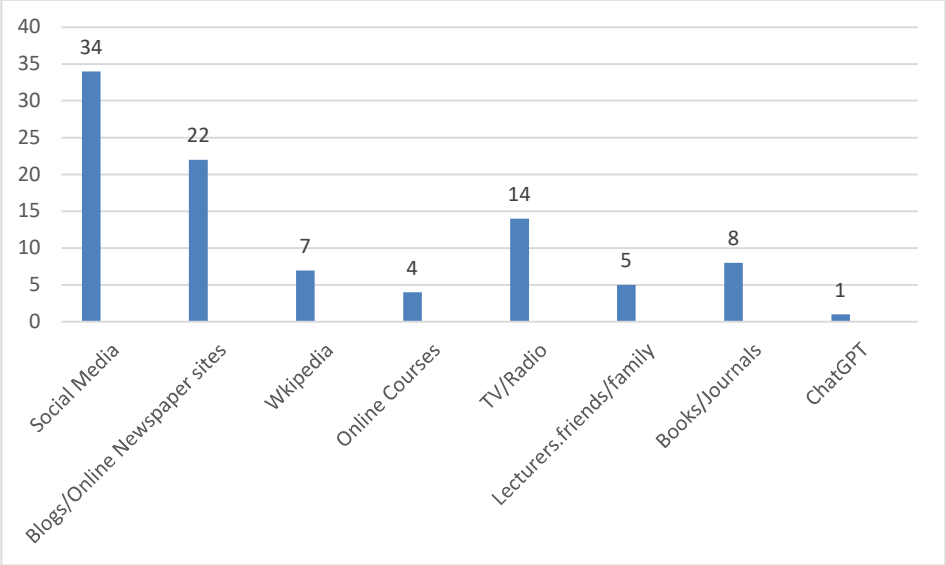

Figure 2: Sources of Climate Change Information (n=60)

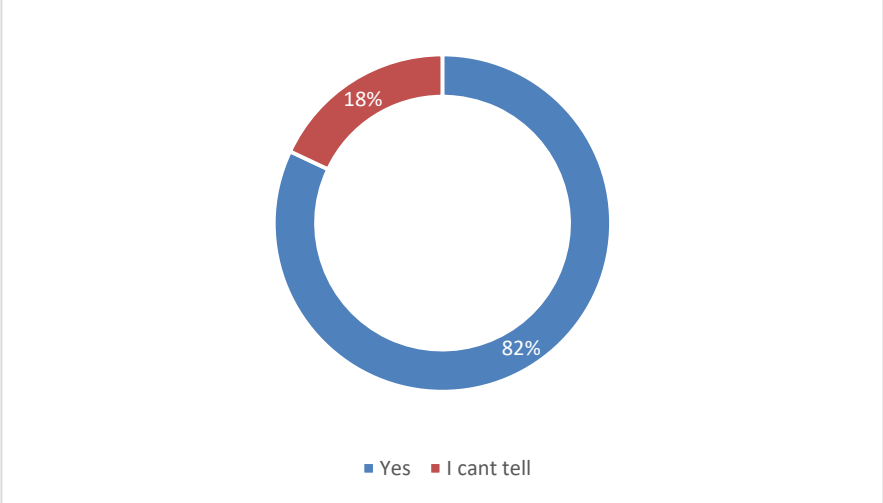

Figure 3: Simple and clear information from sources (n=60)

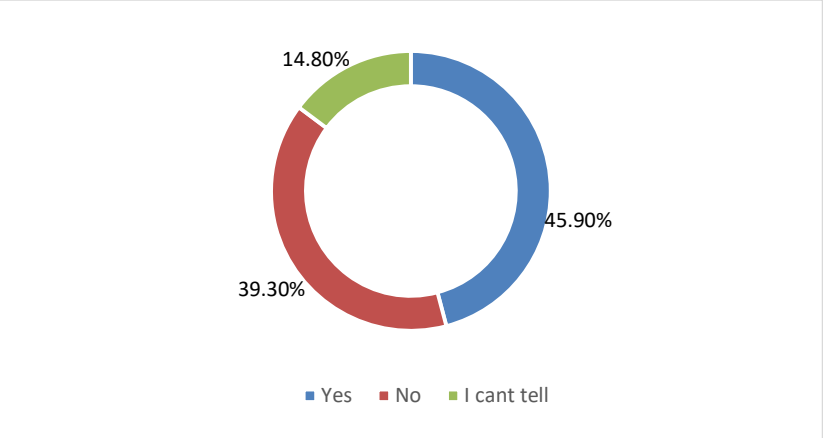

Figure 4: Exposure to climate change misinformation (n=60)

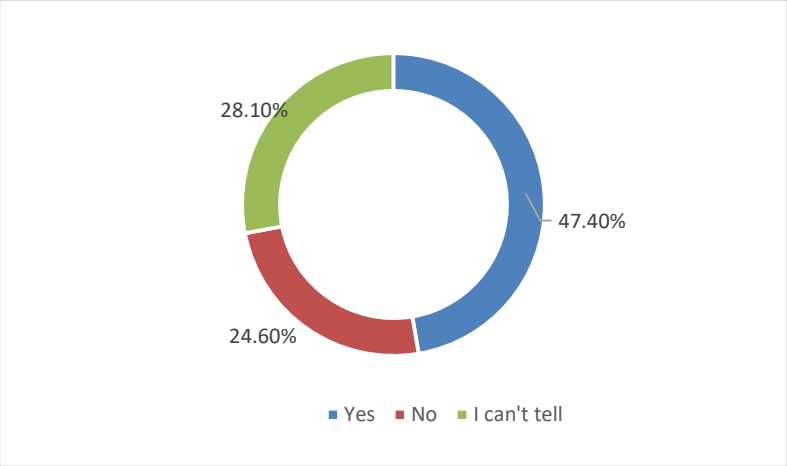

Figure 5: Ability to identify climate change misinformation from sources (n=57)

Over half of the respondents (55.7%) access information on climate change through social media and 36.1% through blogs.

82% find the information simple and clear enough, yet ironically over 59% of the respondents stated that they have either been exposed to climate change misinformation or can't tell if they have been exposed to climate change misinformation nor can 52.7% of the respondents identify climate change misinformation from the most used sources of climate change information.

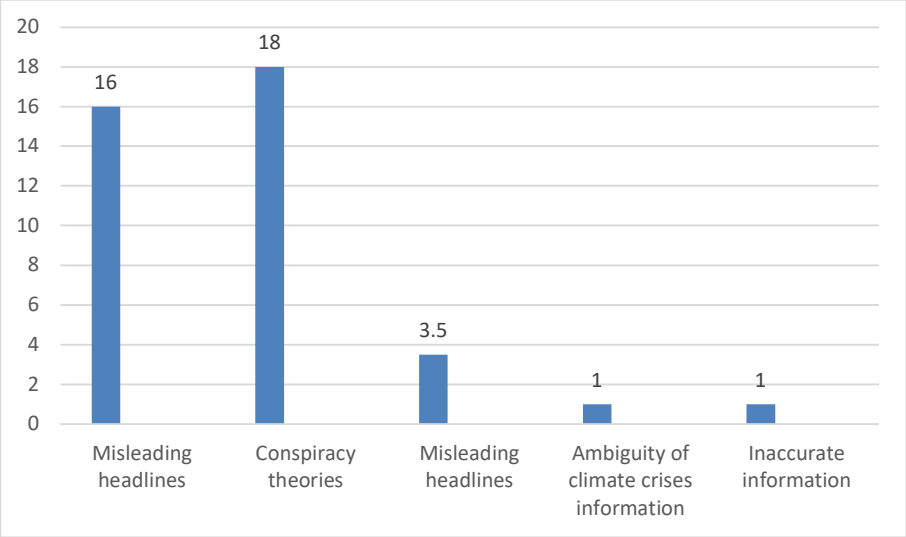

Figure 6: Type of climate change misinformation exposed to (n=32)

56.3% of the respondents have been exposed to conspiracy theories while 50% have been exposed to misleading headlines about climate change which isn't surprising, since most of the respondents get information about climate change from social media and blogs.

Perception of the use of use of Open Education Resources (OER) to curb climate change misinformation

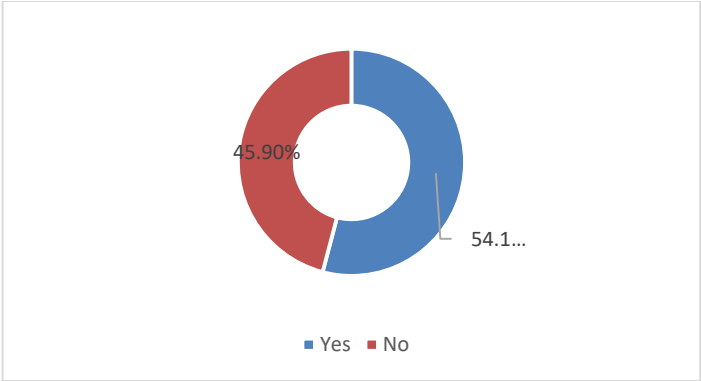

Figure 7: Familiarity with the concept of OER (n=60)

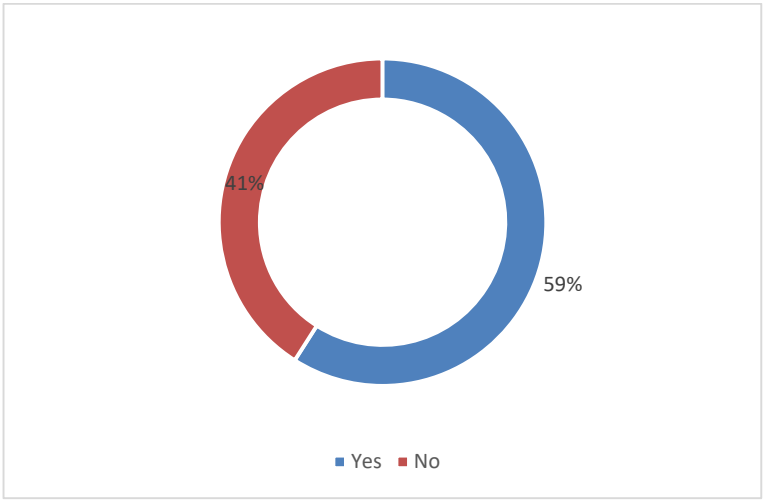

Figure 8: Usage of OERs for any type of learning outside formal studies (n=60)

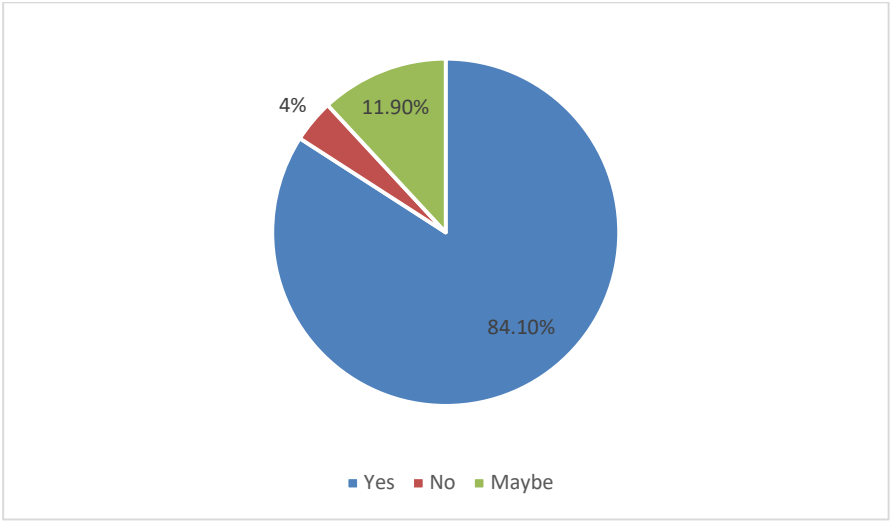

Figure 9: Perception of use of OER as a valuable resource of learning about climate change (n=59)

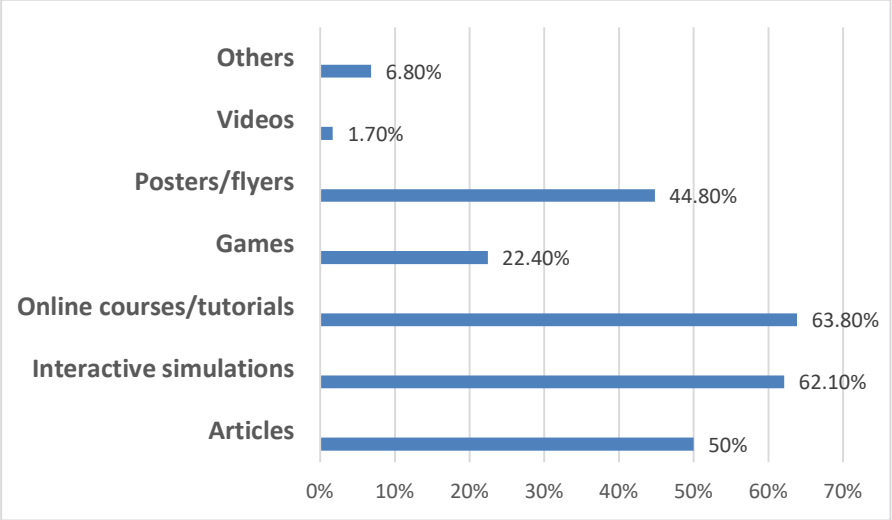

Figure 10: Type of OER effective for Climate Change Literacy (n=58)

54.1% of the respondents stated that they are familiar with the concept of OERs.

81.4% believe these resources are valuable for learning about climate change while 63.8% and 62.1% perceive online tutorials/courses and interactive simulations OERs for educating young people about climate change and countering climate change misinformation.

Discussions

The analysis of data collected from the undergraduate students revealed that there is a general awareness on the existence of climate change and negates the perception that climate change is the 'white man's problem (Nwasum & Eze, 2020).

A pointer to this is that none (0%) of the respondents agreed that climate change doesn't exist.

Furthermore, majority 80% of the respondents perceived climate change as a phenomenon that causes high temperature, and 28.3% believes climate change causes floods, which have been acknowledged by experts (Echendu, 2023).

This speaks to the fact that people and communities like Nigeria with low carbon foot print are facing the consequences of climate change. However, it is pertinent to note that factors like poor drainage systems and deforestation are exacerbating these consequences.

The wave of ubiquitous access to information about any subject matter is obvious with the majority of respondents in this study stating social media and online blogs as major sources of information on climate change. Interestingly, the media has been the main source of information on climate change for over a decade.

A study by Filho (2010) illustrates the fact that the media was the predominant source of information about climate change in all surveyed regions around the world.

Despite that, only in Africa were universities perceived as being consulted for information more often than the Internet. In addition, in Africa and Latin America, the family seems to be an important source of information when compared to other regions.

This study negates the additional findings of Filho as neither the university (except for students studying climate science

courses) nor family are major sources of information on climate change in Nigeria.

Another fascinating finding from the data collected in the current study is that respondents think the information gotten from their sources (social media and online blogs) are simple and clear yet, a good number can't tell if they are misinformed about climate change which implies the low literacy about climate change, and corroborated by studies on climate change literacy (Eze, et. al., 2022; Eheazu, 2019).

While social media and blogs have become reputable information sources in some specialist areas and a significant component of the public's media diet that is used to improve people's general learning, they have generally not adopted the essential elements of mainstream media that foster public trust (Borah, 2015; Campbell et al., 2010), particularly when it comes to agenda-setting and misinformation about climate change (Treen et al., 2020).

Similarly, Anderson (2017) agrees that social media offers a platform for activating those with a sceptical perspective of climate change and framing climate change skeptically.

It is important to state here though that most of these takes on blogs and social media are perceptions as Treen et. al. (2020) found very little research on the diffusion of misinformation via social media platforms and called for further research into climate change misinformation on social media and further examination of the relationship between social media use and climate change perceptions (Anderson, 2017).

The use of OERs and its perceived effectiveness for learning by respondents isn't surprising as the effectiveness of OERs especially online courses (Cheung et. al., 2022) was apparent during the pandemic and has since become ubiquitous among young people.

Another interesting information from the data collected is the perception of interactive simulations as effective resources for learning about climate change. Thankfully, these simulations/videos can be embedded in online tutorials and courses.

Conclusion and Further Research

The study concluded that climate change awareness is rapidly gaining ground as the perception about climate change and its consequences is no longer in doubt among the students.

The study recommended that librarians in the open access space play a key role by increasing accessibility to diverse high quality OERs that would provide accurate information on climate change.

Librarians can also use social media platforms and other digital tools to enhance students' critical thinking and media literacy skills thereby enabling them to discern credible information about climate change from misinformation.

The current study is limited by the use of a small sample size of undergraduate students, and although measures were taken to prevent biases based on the discipline, the participants responded anonymously, thus links on prior formal knowledge about climate change cannot be established.

In addition, future research will benefit from more in-depth engagement in the form of interviews to understand the reasoning behind their perceptions.

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ASSESSING INFORMATION LITERACY COMPETENCIES OF FRESH STUDENTS AT BAUCHI STATE UNIVERSITY GADAU: INSIGHTS FROM THE LIBRARY ENVIRONMENT

Adamu Mohammed[1] & Asma'u Muhammad Yusuf[2]

Department of Library and Information Science, Faculty of Education,
Sa'adu Zungur University, Bauchi[1, 2]
Corresponding email: adamumohammed@basug.edu.ng

Abstract

The purpose of this study is to understand the levels of freshers' information literacy skills at Bauchi State University Gadau, Nigeria. This study was conducted using cross sectional survey research method A questionnaire developed was used for data collection, and the data were analyzed using descriptive statistics of percentages and frequencies that was described in chart formats. The target population in this study comprise of 3,236 freshers during the 2022/2023 academic session of Bauchi State University Gadau. Based on the simple random sampling method, the sample size is three hundred and forty-four (344) as determined by the statistical formulation provided by Yamane (1967). The findings showed that the freshers acquire information literacy skills during orientation, workshops or from course syllabus. the study also found that freshers at Bauchi State University Gadau do not have the proper understanding of the concept of information literacy and cannot identify credible sources of information. Thus, this study recommends that more formal training programmes concerning information literacy skills need to be integrated into freshers' curriculum to support the students learning and can improve their understanding of the concept of information literacy skills.

Keywords: Information literacy, Freshers, information literacy skills, understanding

Introduction

Information literacy skills are sets of abilities that require individuals to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information (ACRL, 2020). The document points out that the information literacy skills were created deliberately to reinforce the above abilities.

As interest in information literacy continues to build the scholarly discussion has begun to consider how information literacy can develop using the latest technology to adapt to diverse students' learning styles.

Information literacy skills are initiated in the higher education of learning and have taken a variety of forms of stand-alone courses or classes, web-based tutorials, course-related instruction, or course-integrated instruction. Moreover, freshers need to know when information is needed and abilities to recognize good sources of information, locate relevant information, and communicate it effectively.

This will enable them to achieve good academic grades, facilitate their research process, improve their long-term self-reliant learning competence and satisfy their immediate information need within the shortest time possible.

Thus, the main goal of this study is to understand the level of information literacy skills that the freshers possess to successfully execute the task of information inquiries using both online and hardcopies resources and to ethically distinguish between authentic information resources for their research and assignment.

Freshers are often new to academic research and assignments; they may struggle to develop information literacy skills, and

information skills are critical for academic success and lifelong learning. Hence, numerous studies have shown that information literacy skills will improve academic performance, increase employability, and promote lifelong learning.

To understand the freshers' information literacy skills, instructors need to incorporate them for effective delivery and promoting critical thinking and reflection.

Ojo and Adebayo (2021) affirmed that information literacy skills has been considered as an ability to locate and use information effectively from widespread sources, including electronic databases, journals, books, and the internet.

The study will understand information literacy skills on the importance of critical evaluation and proper citations among freshers of Bauchi State University Gadau. Freshers have frequently relied on their knowledge and experience when searching for information rather than utilizing more effective research strategies.

The previous study highlights the importance of information literacy instruction for fresher students as it can assist them develop effective research strategies and avoid relying solely on personal knowledge and experience.

The present study has observed that the freshers of Nigerian higher institutions face difficulty in identifying and selecting appropriate sources for research assignments, and they lack knowledge on how to properly cite the reference sources, and they also have limited knowledge to critically evaluate the information for credibility and reliability as well as inabilities to use library resources and other databases effectively.

This study aims to understand the freshers' information literacy skills in terms of skills acquired and difficulty faced to provide strategies that improve their information literacy skills. It is also the aim of this study to understand the freshers' information literacy skills and whether the information literacy skills perceived will assist them to become independent learners in the usage of information resources and services.

Literature Review

Several studies have been carried out on information literacy in among university systems and the need for them cannot be overemphasized because of the relevance of the topic to the students and staff of the institutions and the need for the skills for life-long learning.

A review of some of these literatures which are relevant to this study are done thematically in order to assess the freshers' information literacy competencies in academic libraries.

According to Hosein (2020), the University of West Indies recognized the importance of information literacy and decided to develop a comprehensive information literacy programme in the university.

The study urged that the University of the West Indies St Augustine Campus will identify lifelong learning by ensuring that individuals have intellectual abilities of reasoning and critical thinking as well as being able to construct a framework for learning.

On a similar note, Akinpelu and Daramola (2020) conducted a study on information literacy skills among newly admitted undergraduate students at Obafemi Awolowo University in Nigeria.

The study found that the students lacked the necessary skills to search and evaluate information effectively. In contrary opinion, Julien and Barker (2020) noted that students who mastered advanced information literacy skills have better performance in their academic grades.

This corresponds to the study of Ezeani and Ezeani (2020) who conducted the study on

the information literacy skills among undergraduate students in Nigerian universities. The study found that the majority of students had basic information literacy skills.

Equally, Brink (2020) conducted a study on information literacy skills among undergraduate students at one of South African Universities. The research found that the students had some basic information literacy skills. This contrasts with the findings of Lippincott (2020) that the information literacy instruction for undergraduates needs to be redesigned to shape information needs.

Thus, based on the previous studies, it is discovered that information literacy skills are increasingly assessing among students due to the amount of information accessed in a digital format.

However, few findings suggest that information literacy needs to be redesigned with new areas that develop students' citation skills.

Hence, this study needs to assess the strengths and weaknesses of freshers in terms of information literacy skills in order to find out about the freshers' competencies in using the library and information resources at Bauchi State University libraries.

Statement of the Problem

In universities, freshmen lack adequate information literacy skills essential for locating, evaluating, and effectively utilizing academic resources.

Many freshmen rely heavily on internet search engines rather than utilizing library resources, leading to a deficiency in their ability to discern reliable information sources. Moreover, a significant number of freshmen experience library anxiety, hindering their engagement with library facilities and services. Mohammed (2021) highlighted that undergraduate students often avoid university libraries due to insufficient knowledge, skills, and comfort with library routines, thereby impacting their academic performance and self-directed learning abilities.

Freshmen need to develop timely recognition of information needs, competence in identifying credible sources, and proficiency in accessing and utilizing information effectively.

These competencies are crucial for achieving academic success, enhancing research capabilities, fostering long-term learning independence, and promptly meeting academic demands.

Therefore, this study aims to assess the information literacy skills of freshmen at Bauchi State University Gadau, examining their ability to conduct comprehensive information inquiries using both online and physical resources.

Additionally, the study seeks to explore freshmen's capacity to ethically discern authentic information sources for their academic research and assignments.

Research Questions

This research will answer the following questions:

1. What are the levels of freshers' information literacy skills at Bauchi State University Gadau library?
2. How do freshers acquire information literacy skills at Bauchi State University Gadau library?
3. What are the challenges faced by the freshers in developing information literacy skills at Bauchi State University Gadau library?
4. What are the strategies that will improve the freshers' competencies in terms of information literacy skills at Bauchi State University Gadau library?

Objectives of the Study

This research will seek to achieve the following objectives:

1. To assess the levels of freshers' information literacy skills at Bauchi State University Gadau library.
2. To explore how the freshers acquire information literacy skills at Bauchi State University Gadau library.
3. To determine the challenges faces freshers in developing information literacy skills at Bauchi State University Gadau library.
4. To provide some strategies that can improve the freshers' competencies in terms of information literacy skills at Bauchi State University Gadau library.

Research Methodology

The study was conducted using a cross-sectional survey research design. This research design enables the researcher to obtain information using self-administered questionnaires.

The target population of this study consists of 3,236 freshers during the 2022/2023 academic session of Bauchi State University Gadau. (Source: admission office Bauchi State University, Gadau). Simple random sampling method was used to draw the sample size of 344 relying on a statistical formulation provided by Yamane (1967).

The data collected were analyzed using descriptive statistics of percentages and frequencies in tables and chats.

Results

This section reports the data collected and the results of the study. The data were analyzed to answer the respective research questions in line with research objectives.

Demographic Information: The sample of this study consists of three hundred and forty-four (344) respondents***.*** The data in Table 1.1. Showed that the majority of the respondents were male (53.8%) followed by female (46.2%).

The data on age bracket distribution shows that more than half of the respondents (57.0%) were between the age bracket of 20 – 24 years old, followed by 23.4% between 15 – 19 years and 20.0% between 25 and above years old. Lastly, the data departmental-wise in the faculty of education shows that 55.2% were from the Department of Science Education, followed by 44.8% from Library and Information Science. (*See Table 1.1*).

Table 1.1: Demographic Information of the respondents (n=344)

Group	Frequency	Percentage
Gender		
Males	185	53.8
Females	159	46.2
Age		
15 – 19	79	23.0
20 – 24	196	57.0
25&above	69	20.0
Departments		
Library & Information Science	154	44.8
Science Education	190	55.2

Research Question 1: What is the level of freshers' information literacy skills at Bauchi State University Gadau library?

Chart 1: To assess the levels of freshers' information literacy skills at Bauchi State University Gadau library.

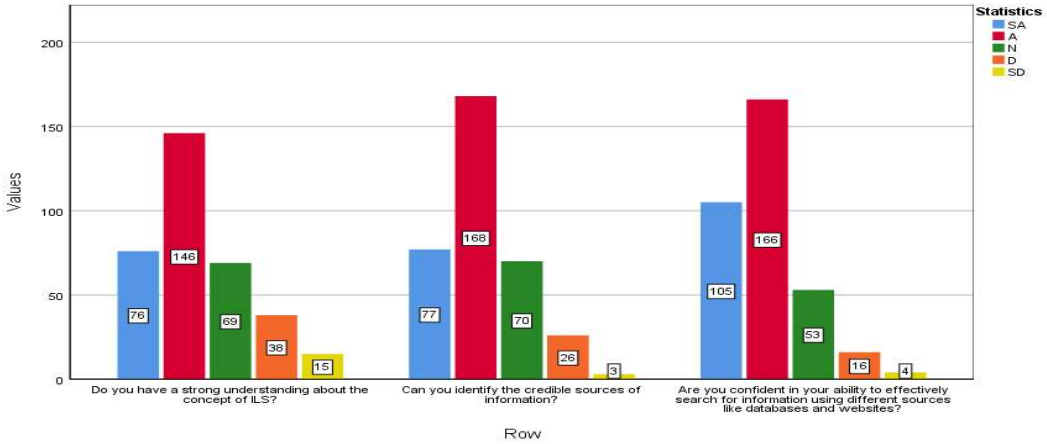

Chart 1: Levels of freshers Information Literacy Skills

To assess the levels of freshers' information literacy skills at Bauchi State University Gadau, Nigeria based on the multiple choices given. The findings indicated that most of the freshers from the faculty of education have a higher level of information literacy perceived at the BASUG library.

Data from the survey showed that the majority of freshers understood information literacy skills by indicating agreement on the three items. In the survey, 222(64.5%) of the respondents agreed that they had comprehended the concept of ILS while 53(15.5%) disagreed with the statement and very few of the respondents 38(11.0%) chose undecided.

However, in response to "identify the credible sources of information" a cumulative number of 245(71.2%) of the respondents agreed that they could identify the credible sources of information while 29(8.5%) of them disagreed with the statement and 26(7.6%) of the respondents choose undecided.

Again, in response to "confidence and ability to effectively search information using many sources" 271(78.8%) of respondents agreed while 20(5.9%) were in disagreement with the statement and only 16(4.7%) chose undecided.

Thus, this shows that the ILS has a positive impact on the majority of the respondents who attended the ILS course at Bauchi State University library.

Research Question 2: How do freshers acquire information literacy skills at Bauchi State University Gadau Library Nigeria?

Chart 2: To explore how freshers acquire information literacy skills at Bauchi State University Gadau library.

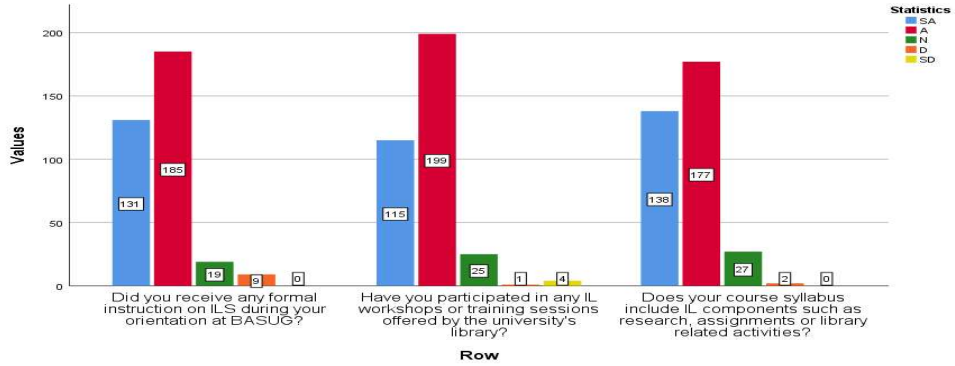

Chart 2: Acquiring Information Literacy Skills by Freshers

To find out how the freshers acquire information literacy skills at BASUG library. Out of multiple answers recorded, a cumulative number of 316(91.9%) agreed that they acquired formal instruction of information literacy skills during orientation at BASUG while 19(5.5%) of respondents chose undecided, only 9(2.6%) of the respondents disagreed with this statement. 314(91.2%) agreed that they have participated in any information literacy workshop training sessions offered by the university library, while 25(7.3%) of the respondents were chosen undecided, and very few of 5(1.5%) disagreed with this statement.

However, in response to "whether the respondents' course syllabus includes IL components such as research, assignments or library-related activities", cumulative answers of 315(91.6%) agreed while 27(7.8%) chose undecided, and only 2(.6%) disagreed with the statement.

Thus, the overall findings show that information literacy was acquired by the freshers either during orientation, workshop or receiving part of the course syllabus include information literacy components such as research, assignments or library related activities.

Research Question 3: What are the challenges faced the freshers in developing information literacy skills at Bauchi State University Gadau library?

Chart 3: To determine the challenges faced the freshers in developing information literacy skills at Bauchi State University Gadau, Nigeria.

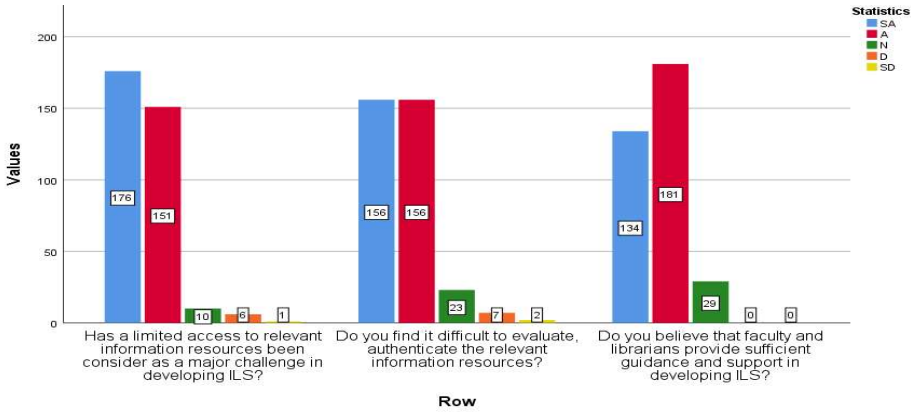

Chart 3: Challenges faced by freshers in developing ILS

The responses in Chart 3 revealed the challenges faced by the freshers in developing information literacy skills at Bauchi State University Gadau, Nigeria. It has revealed that 327(95.1%) agreed that the limited access to relevant information resources was the major challenge faced when developing information literacy skills while 10(2.9%) chose undecided, and only 7(2.0%) disagreed with the statement.

Again, in response to finding it difficult to evaluate and authenticate the relevant information sources, the majority of the respondents 312 (90.6%) agreed that they are facing challenges when evaluating and authenticating the relevant information sources, while 23(6.7%) indicated undecided and only 9(2.6%) of the respondents disagreed with the statement.

This shows that the freshers have serious issue when evaluating and authenticating information sources. Moreover, the study revealed that 315(91.6%) agreed that faculty and librarians provide sufficient guidance and support in developing information literacy skills, while 29(8.4%) chose undecided, and no respondents have disagreed.

Research Question 4: What are strategies that will improve the freshers' competencies in terms of information literacy skills at Bauchi State University Gadau library?

Chart 4: To provide some strategies that can improve freshers' competencies in terms of information literacy skills at Bauchi State University Gadau library.

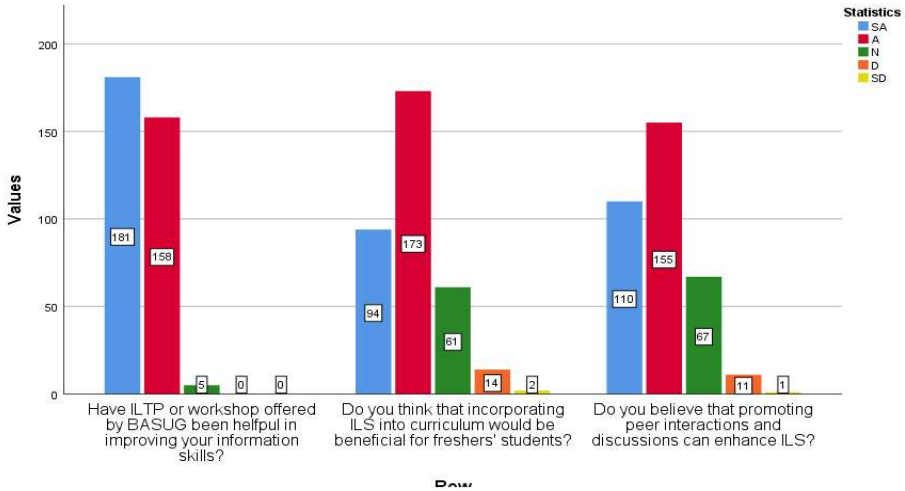

Chart 4: Strategies for improving freshers' competencies

Chart 4 revealed the strategies that can improve the freshers' competencies in terms of information literacy skills at Bauchi State University Gadau, Nigeria.

It shows that 339(98.5%) of the respondents agreed that information literacy training programmes and workshops offered to freshers assist them in improving their information skills, only 5(1.5%) were chosen undecided and no one disagrees with the statement. 267(77.6%) of the respondents agreed to incorporate information literacy skills into their curriculum, while 61(17.7%) chose undecided and only 16(4.7%) disagreed with the statement.

However, in response to "enhance ILS through promoting peer interactions and discussion among freshers" the majority of the respondents 265 (77.1%) agreed with the statement, while 67(19.5%) chose undecided and only 12(3.5%) disagreed.

Thus, the current study agreed on three strategies to improve freshers' information literacy competencies. The study found that fresher students at Bauchi State University Gadau do not have proper understanding of the concept of information literacy and cannot identify credible sources of information.

Discussion

The study revealed that freshers understood the information literacy skills through orientations, workshops and other formal instruction about information literacy skills in the university.

It further revealed that limited access to relevant resources has been the major challenge in developing information literacy skills among freshers and most of the freshers have faced some challenges in terms of evaluating the reliability and relevance of information sources.

This corresponds with findings of Akinpelu and Daramola (2020) who revealed that lack of necessary skills for searching, and evaluating information effectively were considered as major issues affecting newly admitted undergraduate students at Obafemi Awolawo university. The study also revealed that integrating information literacy skills into

freshers' curriculum would be an advantage and promote peer interactions and discussions to enhance information literacy skills competencies among freshers.

Conclusion

Information literacy skills have become an indispensable tool for the achievement of effective learning in higher institutions.

The purpose of this study is to understand the levels of freshers' information literacy skills at Bauchi State University Gadau, Nigeria.

Thus, the overall findings show that information literacy were acquired by the freshers either during orientation, workshop or receive part of the course syllabus.

The current study affirmed the level of information literacy among freshers of Bauchi State University Gadau, as the majority of the respondents have difficulty of identify credible sources of information.

The study found that fresh students in Bauchi state university Gadau do not have proper understanding of the concept of information literacy and cannot identify credible sources of information. Before they acquired information literacy skills.

Recommendations

Based on the findings of this research, the following recommendations were made:

i. More formal training programmes concerning information literacy skills need to be introduced for freshers in the university. This will support the students learning and can improve their understanding about the concept of information literacy skills.

ii. University management should strive to improve access to relevant resources such as access of books, journals and references materials, while integrating information literacy skills into the curriculum will also encourage peer interactions and discussions to foster a more information-literate community.

iii. Students in their early stage of university education should be exposed to preliminary research activities in order to enhance their knowledge of concepts such as copy right, the ability to effectively quote and paraphrase an already existing work as well as been able to use information without plagiarizing.

Acknowledgment

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WORK CONDITION AND INSTITUTIONS COMMITMENT BY LIBRARIANS IN ACADEMIC LIBRARIES

Adaeze Nwona NZEWI, PhD (CLN) [1] & Celine Akudo Agboola [2]
Medical library, College of Health Sciences and Technology Nnamdi Azikiwe University, Nnewi Campus[1]
Department of Centre for Conflict management and Peace Studies University of Jos, Jos, Plateau State[2]
agboola@unijos.edu.ng

Abstract

In this study, the researcher investigated the Relationship between Work Condition and Institutions Commitment by Librarians in Academic Libraries. *The study ascertained the relationship between training, promotion, disciplinary measures, and Institutions commitment. Three hypotheses guided the study in line with its purpose. The design of the study was correlational. The study population is one hundred and twenty-one (121) and comprises the librarians and library officers of the twelve tertiary education institutions in Anambra State. The entire population was used for the study; thus, the census method of sampling technique was adopted. Reliability coefficients of 0.76 and 0.88 were attained for work conditions and Institutions commitment using the Cronbach alpha reliability statistics method. The t-test was used to test hypotheses at a 0.05 level of significance. The study's findings showed a highly positive and significant relationship between training, promotion, disciplinary measures and Institutions commitment. Based on the findings, the researcher recommended that the authorities of the academic libraries in Anambra State should ensure strict and unbiased implementation of the various working conditions in their academic libraries to ensure steady growth and development.*

Keywords: Work Condition, Relationship, Organizational, Commitment, Academic Libraries and Librarians.

Introduction

The psychological contract between the employer and employee has changed fundamentally in the modern Institutions work.

Either party no longer expects a long-term commitment to an organization because the face of a new contract between employees is that employees continually change jobs throughout their careers, endeavouring to secure the best for themselves (Ng'ethe, 2013).

The primary purpose of employee retention policies is to identify and retain committed employees for as long as it is mutually profitable to the organization and the employees and also prevent competent employees from leaving the organization, as this could have adverse effects on productivity and service delivery (Chiboiwa et al., 2010). To achieve quality retention programmes, organizations ought to determine the retention factors relevant to each employee group and then focus strategies on these factors, such as work-life balance, work environment, employee compensation, employee training and development and job security.

Researchers have conducted studies and reported findings to ascertain the relationship between work conditions and Institutions commitment. In a study carried out by Moos, cited by Aremo and Binuyo (2020), it was reported that involvement, co-worker cohesion, supervisory support, autonomy, task orientation, work pressure, clarity, managerial control, innovation and physical comfort are all significant positive predictors of affective commitment which is one of the indicators of Institutions commitment.

On continuance commitment, all the above-stated indicators do not record any positive significance or relationship. It was

reported that none of the above indicators significantly account for predicting normative commitment.

However, the relationship between work conditions and organization commitment revealed that the Institutions commitment of university teachers at the University of Lahore, Pakistan, is linked with a high emphasis on work aspects such as involvement, supervisor's support, work pressure, clarity, managerial control, involvement and physical comfort (Aremo & Binuyo, 2020).

It was also reported that all the indicators have a positive relationship with Institutions commitment, but precisely, supervisor support was reported to have a strong relationship with Institutions commitment. (Singh, Benjakul, Maqsood, & Kishimura, 2011) In his study on work conditions, burnout, and organization and the role of personal variables as a moderator, he discovered supervisor support as a negative predictor of continuance commitment, indicating no relationship between supervisor support and Institutions commitment.

In light of this, Owolabi and Salaam (2010), in their study on Job satisfaction and Institutions commitment of academic librarians in Nigerian universities, emphasised that there is a need for library management to provide a good work for librarians considering the nature of their jobs and provision of timely information to help them perform their duties.

Work condition is the prevailing situation obtainable in a working place. Afşar (2014) cited Hornby, who defined work as a person's job, especially to earn money. The same source defined condition as the circumstances in which people live, work or do things.

Chiboiwa, Samuel and Chipunza (2010) define work as a job to get paid. The same source also defined the condition as the situation in which people live or work, especially the physical things that affect the quality of their lives. From the preceding, it can be rightly deduced that work condition is the situation or circumstances under which people perform given or assigned jobs to get paid or remunerated.

Work conditions incorporate the rules, laws, guidelines, benefits, and penalties, favourable or unfavourable, which are permanently attached to the performance of tasks by employers to ensure that employees commit the best possible effort to ensure an organization's growth, development and survival. When the working condition is deemed favourable, it elicits the best out of employees regarding output and commitment to duty.

For this study, academic title, salary, years in the organization, years in current position, type of employment, manner of work, and overtime are included under the title of *work conditions*.

Years in the organization are one of those variables most studied regarding its relationship with Institutions commitment. This variable is also related to time, such as age (Afşar, 2014). There are findings that as the years in an organization increase, the Institutions commitment increases since the person's benefits will also increase.

A person who has worked in the same organization for many years will evaluate his investments if he thinks about resigning. If he is going to be included in a new organization, this evaluation will include the opportunities provided by that new organization.

As a result of these calculations, if the person finds that he will lose the outcomes of his investments when he resigns, he may increase his continuance commitment to the existing organization (Afşar, 2014).

Within this frame work, it should be noted that the working conditions of the academic libraries in federal universities are pretty different, particularly the forms of employment of the faculty members (Tat & Rasli, 2012). It is an essential matter of debate what kind of impact

the work conditions of the librarians, their perception of Institutions protectiveness and employees' demographics have on their Institutions commitment in these two such different Institutions structures.

In light of this, the study has two goals: 1) to examine the impact of the quality of work-life on Institutions commitment in a comparative manner through academicians working for state and federal universities; to comparatively reveal which of the following factors have impacted most on Institutions commitment most as of the type of university: quality of work life, academic title, salary, years in the organization, years in current position, type of employment, work arrangement type (full time, part-time, etc.), and over time, perceived Institutions protectiveness, and demographic characteristics such as age, gender and marital status(Tat & Rasli, 2012).

Conversely, when seen as unfavourable, many vices and unwholesome behaviours, such as truancy, lateness to duty, and absenteeism, are always manifested. Employees may take up employment under unfavourable work conditions for survival purposes, but such employees are never committed to their jobs.

Such employees are also quick to take up appointments in organizations with more favourable work conditions when there is an opportunity. Sound work conditions play a crucial role in creating the right attitude in work places, which is needed to cultivate high Institutions commitment among employees.

Okoye and Ezejiofor (2013) stress that the future of any organization depends more on its staff than any other factor, and the usefulness of many service institutions, such as libraries, is measured by the services they render to users.

According to the authors, the work conditions implemented in various academic libraries could disrupt or enhance the librarians' adequate provision of information services. The human resources of any organization, such as the library, are the backbone of the organization, the mover, and the coordinator of other factors of production.

The existence of work conditions that can elicit their loyalty and commitment to the organization's aims and objectives becomes imperative. According to Dizgah, Chegini and Bisokhan (2012), employees' performance level is determined by how favourable or unfavourable the work conditions are. Okoye, Mbagwu, Moneke and Abanum (2018) also affirmed that the overall productivity of any organization is based on sound work conditions.

According to the authors, organizations can use work conditions to encourage employees to attain desirable job performance, bring positive change, and keep counterproductive conduct under control. Such conditions include training, rewards, leave, job security, appraisal, work, supervision, and disciplinary measures.

Institutions Commitment

Institutions commitment refers to employee involvement in his/her work (Deepa, Palaniswamy & Kuppusamy, 2014). Bachanamas, cited in Mosaybian and Jafari (2017), defined commitment as an emotional and prejudice-oriented linkage to the objectives of an organization.

Also, Wiener, cited in Mosaybian and Jafari (2017), defines commitment as a collection of internal emotional pressures that would result in people acting in such a way as to ensure that the objectives and interests of their organizations are met.

Atak (2011) argue that commitment as an attitude involves employees' loyalty to the organization, the internalization of goals and objectives, and the willingness of employees to play a role in achieving these goals and objectives. Hornby (2006) defined commitment

as the willingness to work hard and give energy and time to a job or an activity.

Commitment can also be seen as a resolve to ensure the success of a given task or agenda when used in organizations. Commitment entails willingness and effort to see to the success of an organization through devotion to duty and obedience to established rules and regulations.

Mowday, Steers and Porter, cited in Jandaghi, Mokhles and Bahrami (2011), define Institutions commitment as the relative degree of an individual's identity in an organization and his/her contribution. Newston and Davies, as cited in Ajie and Omotunde (2015), posit that Institutions commitment is the degree to which an employee identifies with an organization and wants to continue actively participating.

Herscoritch and Merger, as cited in Agyare, Yuhni, Mensah and Aidoo (2016), posited that Institutions commitment reflects how devoted an employee is to his organization, which usually comes about if he feels that he can identify with the values and objectives of the organization.

According to the authors, how committed an employee always plays a role in exerting more effort on the job. They further posited that Institutions commitment portrays how much an employee values his membership in an organization and the extent to which he believes the organization's objectives align with his values.

Igella (2014) stressed that no organization in today's competitive world could perform at peak levels unless each employee is committed to the organization's objectives and work as an influential team member. That is why John and Elyse (2010) believed that commitment can be seen as a psychological state that binds the individual to the organization.

A committed employee wants to remain with the organization and be identified with the success story of the organization. According to Scott (2007), such committed employees will remain with the organization longer than those less committed.

According to John and Elyse (2010), implementing new ideas and initiatives will be compromised without commitment. According to Mosaybian and Jafari (2017), many scholars believe that Institutions commitment creates a positive and emotional relationship between the organization and its employees in a way that they become united. According to the authors, this unification and integration cause employees to adapt themselves to the established norms of the organization.

Institutions commitment leads to the attainment of Institutions goals. It has many benefits for the organization, including assurance of growth and development. Harter, as cited in Igella (2014), asserts that greater levels of employee commitment lead to Institutions benefits such as continuous flow of improvement, cost and efficiency improvements and active employee participation. It leads to increased productivity.

Brown, McHardy, McNabb and Taylor (2011) assert that Institutions commitment will result in benefits such as increased job satisfaction of work, increased job performance, increased total return to shareholders, increased sales, decreased employee turnover, decreased intention to leave, decreased intention to search

for an alternative job and decreased absenteeism. Institutions commitment leads to attachment to one's job or duties, and thus, is what every organization should desire.

Tolera (2018) states that committed employees bring added value to the organization through their determination, proactive support, relatively high productivity and awareness of quality. Gattungu, Iravo and Namusonye (2015) also observed that Institutions commitment can potentially reduce employee turnover and absenteeism.

Nowadays, Steers and Porter, as cited in Jadagnhi, Mokhles and Bahrami (2011), observe that Institutions commitment consists of three elements as follows: believing in the Institutions values and goals, the propensity to broad efforts in the Institutions path and a high propensity to the continuance of Institutions membership.

In support of the above observation, Mosaybian and Jafari (2017) explain three types of Institutions commitment: emotional or compelling, continual or logical, and obligatory or normative. According to the authors, emotional or compelling commitment refers to the costs of leaving the organization and the feeling of being identified in an organization.

In contrast, continual or logical commitment refers to the costs of leaving the organization or staying to use investments. The authors explained that obligatory or normative commitment refers to the commitment and obligation to stay in the organization.

According to them, employees who believe that the organization supports them are willing to have an emotional commitment to that organization, while those who invest in the organization would have continual commitment because if they leave, they may be in danger.

Agyare, Yuhni, Mensah and Aidoo (2016) explain that emotional or compelling commitment refers to those ties that bind an employee to his organization. They stressed that the positive feeling of an employee causes him to work harder to help attain the Institutions goals and that this feeling gives him a sense of pride for being part of the organization. The authors described continual commitment as developing when an employee realizes he has invested in an organization.

Therefore, he is bound by economic and social costs, which will cause him to avoid leaving the organization. The authors also explained that normative commitment is a feeling of being morally obliged to remain with an organization.

In this type of commitment, work feel that the company or organization has helped them in the past and that they need to return the favour by maintaining their status as employees. They asserted that Institutions commitment is an essential requisition in an employee to reach challenging goals in an organization.

Concerning the study, the work conditions available in an organization will guarantee the sustenance of Institutions commitment, without which there will be a failure. Commitment is what every organization should desire and sustain, as this is crucial to its growth and survival.

Although individual differences may play a role in an employee, the perception by an employee that an organization caters for his interest can elicit commitment from the employee as a pay-back mechanism, thus leading to his

putting in his best to ensure the survival and growth of the organization. This is because commitment is always attained due to satisfaction, which favourable work conditions can bring about. Kabir and Parvin (2011) posit that a well–managed business organization typically considers the average employee as the primary source of productivity gains, and such organizations consider employees rather than capital as the core foundation of the business and contributors to the firm's development.

To ensure the achievement of its goals, the organization creates an atmosphere of commitment and cooperation among its employees through policies that facilitate employee satisfaction. This will lead to loyalty and commitment to the firm, resulting in greater productivity and lower turnover rates.

Academic libraries need committed employees to excel, serve their different types of clientele and members of their academic community, and thus attain the objectives for establishing them. Work conditions that can engender staff loyalty and commitment remain the platform for ensuring the commitment of the employees of academic libraries.

Preliminary observation by the researchers shows that despite the presence of the various work conditions like promotion, appraisal and supervision in academic libraries in Anambra State, there is still evidence of a lack of commitment by the staff of the libraries, such as lateness to work, truancy, leaving materials unkempt and haphazardly arranged.

This ugly scene may be linked to various work conditions implemented in academic libraries. Given the critical roles played by academic libraries in the attainment of the educational and research goals of their institutions, it becomes necessary to ascertain the influence of the various work conditions existing in the academic libraries on Institutions commitment of staff with the view to establishing and adopting those which implementation will continue to elicit and sustain commitment of staff to their duties to avoid further decay, hence this study Relationship between Work Condition and Organizational Commitment by Librarians in Academic Libraries**.**

Hypotheses

The following null hypotheses were formulated, and each of them was tested at a 0.05 level of significance:

Ho_1: The coefficient of the relationship between training and Institutions commitment of the staff of academic libraries in Anambra State, Nigeria, is insignificant.

Ho_2: The coefficient of the relationship between promotion and Institutions commitment of staff of academic libraries in Anambra State, Nigeria, is insignificant.

Ho3: The coefficient of the relationship between the disciplinary measure and Institutions commitment of the staff of academic libraries in Anambra State, Nigeria, is insignificant.

Methodology

The study ascertained the relationship between training, promotion, disciplinary measures, and Institutions commitment. Three hypotheses guided the study in line with its purpose. The design of the study was correlational.

The study population is one hundred and twenty-one (121) and comprises the librarians and library officers of the twelve tertiary education institutions in Anambra State. The entire population was used for the study; thus,

the census method of sampling technique was adopted. The instrument used for data collection was the questionnaire. The Pearson correlation method was used to answer research questions that guided the study, while a t-test was used to test hypotheses at a 0.05 significance level.

Hypothesis 1

Ho_1: The coefficient of the relationship between training and Institutions commitment of the staff of academic libraries in Anambra State is not significant.

Table 1: Summaries of statistics involved in the t-test of the significance of (Pearson r) the simple linear coefficient of the relationship between training and Institutions commitment of the staff of academic libraries in Anambra State.

V	n	∑	R	α	df	cal	tab	Decision
X_1	121	3513						
			0.61	0.05	119	**8.395**	**1.96**	Reject Ho_1
Y	121	3928						

Variables (V), Sample Size (n), Summation (∑), Coefficient of Relationship (r), Alpha Level (α), Degree of Freedom (df) and t-test of Significance of Simple Linear Correlation between two Variables

Table 1 shows the test of the significance of the coefficient of the relationship between training and Institutions commitment of staff of academic libraries in Anambra State. The result entails that the degree of freedom is 119, the t-calculated value is 8.395, and the t-tabulated value is 1.96. The t-calculated value is greater than the t-tabulated value; hence, the null hypothesis was rejected. Thus, the inference that the coefficient of the relationship between training and Institutions commitment of staff of academic libraries in Anambra State is significant.

Hypothesis 2

Ho_2: The coefficient of the relationship between promotion and Institutions commitment of the staff of academic libraries in Anambra State is not significant.

Table 2: Summaries of statistics involved in the t-test of the significance of (Pearson r) the simple linear coefficient of the relationship between promotion and Institutions commitment of the staff of academic libraries in Anambra State.

V	n	∑	R	α	df	cal	tab	Decision
X_2	121	4871						
			0.647	0.05	119	**9.256**	**1.96**	Reject Ho_2
Y	121	3928						

Vavariables (V), Sample Size (n), Summation (∑), Coefficient of Relationship (r), Alpha Level (α), Degree of Freedom (df) and t-test of Significance of Simple Linear Correlation between two Variables

Table 2 shows the test of the significance of the coefficient of the relationship between promotion and Institutions commitment of the staff of academic libraries in Anambra State. The result entails that the degree of freedom is 119, the t-calculated value is 9.256, and the t-tabulated value is 1.96. The t-calculated value is greater than the t-tabulated value; hence, the null hypothesis was rejected. Thus, the inference that the coefficient of the relationship between promotion and Institutions commitment of staff of academic libraries in Anambra State is significant.

Hypothesis 3

Ho3: The coefficient of the relationship between the disciplinary measures and Institutions commitment of the staff of academic libraries in Anambra State is insignificant.

Table 3: Summaries of statistics involved in the t-test of the significance of (Pearson r) the simple linear coefficient of the relationship between the disciplinary measure and Institutions commitment of staff of academic libraries in Anambra State

V	n	∑	r	α	df	cal	tab	Decision
X_6	121	3995						
			0.657	0.05	119	**9.508**	**1.96**	Reject Ho_6
Y	121	3928						

Variables (V), Sample Size (n), Summation (∑), Coefficient of Relationship (r), Alpha Level (α), Degree of Freedom (df) and t-test of Significance of Simple Linear Correlation between two Variables

Table 3 shows the test of the significance of the coefficient of the relationship between the disciplinary measures and Institutions commitment of the staff of academic libraries in Anambra State.

The result entails that the degree of freedom is 119, the t-calculated value is 9.985, and the t-tabulated value is 1.96. It is evident that the t-calculated value is greater than the t-tabulated value; hence, the null hypothesis was rejected, thus drawing the inference that the coefficient of relationship between the disciplinary measure and Institutions commitment of the staff of academic libraries in Anambra State is significant.

Discussion of Findings

Relationship between training and Institutions commitment of staff of academic libraries in Anambra State

The study revealed a significant positive relationship between training and Institutions commitment among the staff of academic libraries in Anambra State.

The positive sign shows that an increase in one variable could lead to the same measure of increase in the other variable, implying a corresponding relationship between the two variables (training and Institutions commitment of staff of academic libraries). This finding is factual because constant staff training enhances library

staff Institutions commitment. This also shows that library staff constantly engaged in on-the-job training will likely be more committed to their work.

This finding agrees with the research findings of Obi-Anike and Ekwe (2014), which revealed a positive relationship between training and Institutions performance due to improved skill and commitment made possible through training.

Similarly, Engetou's (2017) findings showed that training positively impacts Institutions performance due to improved skills and commitment among employees. Also, Suma and Lesha's (2013) findings showed that the employees exhibited a high level of Institutions commitment due to constant training. The recorded similarities among the findings above could be attributed to using similar variables.

Relationship between promotion and Institutions commitment of the staff of academic libraries in Anambra State

The study also found a highly positive and significant relationship between promotion and Institutions commitment among academic library staff at Anambra State.

This finding shows a high tendency for a library employee to be very committed to his/her library duties and to commit to his/her place of work if his/her promotion on the job is regular without delay.

This is because promotion enhances motivation and then performance cum commitment. On the contrary, the library staff could also have less commitment to their jobs if the promotion is not regular. This finding agrees with Gathungu, Iravo, and Namusonye's (2015) findings, which show a significant relationship between promotion and Institutions commitment.

Relationship between disciplinary measure and Institutions commitment of staff of academic libraries in Anambra State

The study revealed a highly positive and significant relationship between the disciplinary measures and the Institutions commitment of the staff of academic libraries in Anambra State. This shows that effectively conducting disciplinary measures in the work place has an excellent tendency to improve the Institutions commitment of the staff of academic libraries.

This is true because when staff are disciplined correctly, they tend to focus on their work and thus enhance their commitment to the job. This finding aligns with Marsela's (2017) finding, which showed that different disciplinary measures all positively influence employee performance.

In a related manner, Iheanacho, Edem and Ekpe's (2017) findings show a positive, strong correlation between all sub-scales of discipline and Institutions performance. Similarly, Idirs and Alegbeleye's (2015) findings showed a positive relationship between discipline and personnel performance, hence the need to keep a high standard of discipline in an organization.

Condition and Recommendations

In this study, the researcher investigated the work conditions and Institutions commitment of the academic library staff at Anambra State, Nigeria. The study presented a background that introduced the importance of the study with three research questions and three hypotheses.

The study also reviewed some related literature. The study adopted a correlation research design which used the simple linear method. The population of this study is one hundred and twenty-one (121) and comprises the librarians and library officers of the academic libraries under study.

The entire population (121) was used for the study since the researcher conveniently managed it.

Among the findings of the study are that there is a high positive and significant relationship between training and Institutions commitment of staff of academic libraries in Anambra State; there is a high positive and significant relationship between promotion and Institutions commitment of staff of academic libraries in Anambra State; and there is a high positive and significant relationship between disciplinary measure and Institutions commitment of staff of academic libraries in Anambra State;

The authorities of the parent institutions of the libraries should carry regular promotion to both senior and junior staff. This makes staff committed to the job. The promotion issue in academic libraries should be looked into to ensure staff are promoted as and when due.

The study concluded, among others, that work conditions are highly and significantly associated with the Institutions commitment of the staff of academic libraries in Anambra State, Nigeria.

Based on the findings of this study, the researchers recommended, among others,

i. That the management should make an effort for the academic libraries to improve the loyalty and commitment of their staff to bring continuous development to the academic libraries.

ii. The management should make efforts to allow the academic libraries to allow staff to go for regular training in workshops, conferences, and other activities outside the country.

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